A Clinical Lecture
ON
CARCINOMA OF THE PANCREAS.

Delivered at Guy's Hospital on Oct 17th, 1896,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—We have recently had in Stephen Ward two patients who have died from carcinoma of the pancreas, and as that is not a common malady it seemed to me that we might well consider it to-day. The histories of the cases are briefly as follows.

CASE 1.—A man aged forty-three years was admitted on June 1st, 1896, for great pain in the upper part of the abdomen and wasting. He had had syphilis. Otherwise his previous history was unimportant. This illness began three months previously with loss of flesh and pain in the abdomen. On admission the patient appeared wasted and looked distressed and ill. There was much tenderness on deep pressure in the upper part of the abdomen, but the recti were so rigid that no satisfactory examination could be made. The whole body was most carefully examined, but nothing further that was abnormal could be detected. The diagnosis of malignant disease of the pancreas was suggested. After he had been in hospital a couple of days an anæsthetic was given to facilitate an examination of the abdomen, but nothing abnormal could be felt. During the first fortnight he gained seven pounds in weight. On July 3rd a hard lump could be felt in the abdominal wall on the right side at about the level of the umbilicus. It was clearly in the wall and felt as though a florin were let into the wall underneath the muscles. There was little doubt but that this was a carcinomatous nodule and the inference drawn at the time was that this was a secondary deposit in the peritoneum. During the ensuing week other lumps were felt in the various parts of the abdominal wall, and about this time the patient began to loose flesh rapidly, and died exhausted on July 15th. During the whole of his illness he was much troubled by constipation. The only treatment adopted was that morphia was given to relieve pain and every attempt was made to get the patient to take food. At the necropsy there was a large, hard mass of primary schirrus of the pancreas occupying the whole of the tail of the organ. The pancreatic duct was neither pressed upon nor dilated. There were many secondary growths in the liver, some of them as large as walnuts, and there were many nodules on the parietal peritoneum, so that the abdominal wall had by means of growth become quite adherent to the liver over it. The peritoneal cavity contained 122 ounces of blood-stained fluid. The head of the pancreas and the glands in the portal fissue were unaffected and the gall-bladder was not dilated.

CASE 2.—A man aged fifty-four years was admitted into Stephen Ward on July 10th, 1896. His previous history was unimportant. The present illness began with diarrhœa. At the end of June, after this had continued a few days, he began to complain of pain in the upper part of the abdomen. A medical man gave him some medicine, which stopped the diarrhœa. On July 10th he felt very faint and soon after vomited, bringing up, it was said, half a pint of blood. He was at once brought to the hospital. On admission he was very collapsed and blanched, and was too ill to be examined in great detail, but as far as could be made out there was an increased sense of resistance just above the umbilicus. He was not wasted and the heart, lungs and urine were all healthy. Four days after he again vomited a large amount of bright red blood and during the next four days he remained very weak. On July 18th he had a very severe attack of hæmatemesis and passed blood per rectum. About twenty-four hours after this he sank and died. The diagnosis was thought to lie between cirrhosis and carcinoma of the stomach. At the necropsy the stomach and intestines were full of blood. The head and tail of the pancreas were quite healthy, but the centre was occupied by a large, hard, solid mass of carcinomatous growth which was adherent to the stomach and had ulcerated through it at a spot on the lesser curvature two and a half inches from the pylorus, and it appeared certain that the blood had come from this ulcerating mass of growth. There were one or two secondary nodules in the stomach close to the primary growth and also one or two in the kidneys. The portal fissure was free. The gall-bladder was not dilated.

The second case is altogether so rare that I think we shall learn most if we begin by studying the first case. The problem we had to solve was what could be the matter with a middle-aged man who was wasting and had great pain in the upper part of his abdomen. So few were his symptoms that it was suggested that he was suffering from that disease called "anorexia nervosa," in which patients who have no organic disease take very little food and waste very much. They are to be treated by rest, isolation, massage, and overfeeding. But not only were the great local pain and tenderness strongly against such a view, but you must always remember that rigidity of the abdominal muscles means organic disease underneath them. This is a most important sign. Only this week we examined a patient in Mary Ward whose abdominal wall was so rigid that we could learn nothing as to the condition of the structures underneath it. We gave an anæsthetic and then felt a large malignant mass growing up from the pelvis. Having decided that our patient had some organic disease in his abdomen we next tried to find what would cause his symptoms. Intestinal tuberculosis would have given rise to diarrhœa. Renal tuberculosis shows itself in the urine. Neither tuberculosis of the intra-abdominal lymph glands nor peritoneal tuberculosis causes intense pain, and the latter gives rise to peritonitis, of which the patient showed no signs on admission. Some of you suggested aneurysm, and a very good suggestion too, especially as the patient had had syphilis. [You will remember a man in Stephen Ward last spring who was on account of pain in the renal region thought to have either renal calculus or growth, but he turned out to have an aneurysm of his renal artery.] However, the most careful examination, even under an anæsthetic, failed to discover any aneurysm, so we were driven to the belief that there must be an intra-abdominal malignant growth. The next thing to decide was the organ in which it was situated. There was when the man came in no evidence that the growth was in the stomach, intestines, liver, suprarenal capsules, or spine, for we examined him for symptoms of malignant disease of each of these, and the rigidity above the umbilicus showed it was high up in the abdomen. Therefore, all that was left to us was the pancreas and I particularly want you to remember that, in its early stages at any rate and sometimes during the whole of the patient's life, the only signs of malignant disease of the pancreas may be wasting, rigidity of the abdominal muscles, severe deep-seated pain and tenderness, and vomiting; and the last, as in the case before us, may be absent. So true is this statement that, in spite of the fact that after an anæsthetic no tumour of the pancreas could be felt, although in this patient the walls relaxed so completely that the abdomen became very easy to examine thoroughly, yet we all held to the original suggestion of malignant disease of the pancreas. Some, if I remember rightly, thought it was against the diagnosis that the patient gained a few pounds in weight. If the evidence of malignant disease is strong do not let a slight improvement make you change your opinion, for rest in bed and good food will often lead to a gain in weight which, as this case showed, is only temporary. The development of peritoneal malignant nodules went a long way to confirming the diagnosis, for malignant disease of the peritoneum is almost invariably secondary.

It must appeal to you as a striking fact that with so few symptoms the diagnosis of malignant disease of the pancreas can be made. It is the cause of death of about 1 in every 300 patients examined in the post-mortem room of this hospital, and in the majority of cases argues that our patients did not show one present.

I have looked through our hospital records for the twelve years 1883-94, both inclusive, and during that time nearly 6000 post mortem examinations have been made. On 99 occasions the pancreas has appeared to the demonstrator of morbid anatomy to be diseased, and the following list gives the frequency with which the various morbid conditions have been found: cirrhotic, congested, or hard pancreas, 20; primary malignant disease, 19; small or atrophied pancreas, 16; secondary deposits of growth in pancreas, 11; fatty pancreas, 8; malignant growth of other organs adherent to pancreas, 7; cysts of pancreas (including one case of hydatid), 4; pancreatic calculi, 3; floor of ulcer of stomach adherent to

pancreas, 3; tubercle of pancreas, 2; dilation of ducts not due to growth, 2; floor of duodenal ulcer formed by pancreas, 1; abscess of pancreas, 1; œdema of pancreas, 1; and ruptured pancreas, 1. We have had one case of hæmorrhagic pancreatitis since this list was drawn up.

The cirrhotic, congested, or hard pancreas was nearly always associated with increased venous pressure due to cardiac, pulmonary, or hepatic disease, and was as far as is known of no clinical interest. In thirteen out of the sixteen cases in which the pancreas was small diabetes was present, and beyond the symptoms of this disease there was during life no evidence that the pancreas was diseased. When this organ was the seat of secondary deposits or hard growths of other organs adherent to it the symptoms of the primary disease quite overshadowed those due to the affection of the pancreas. The fatty pancreas was generally associated with old age, and although pancreatic calculi, pancreatic cysts, and hæmorrhagic pancreatitis are extremely interesting, yet we cannot stop to consider them to-day, and the above list shows that they are so rare in comparison with primary malignant disease that that is the disease of the pancreas most interesting from a clinical point of view. The growth is almost always a scirrhous carcinoma. The medullary variety is rare and sarcoma is excessively rare. The proportion of males to females is two to one, and most patients are somewhere between forty and sixty years old. You will notice our two patients illustrate all these points.

It is extremely important for you to bear in mind that the growth is nearly always in the head of the gland, and as a result of this the common bile-duct is pressed upon, the bile-ducts dilate, the liver becomes enlarged, the gall-bladder is, in at least a third of the cases, distended, and it may be felt as a tumour projecting from underneath the liver, the patient may be jaundiced, his stools clay-coloured, and he may show signs of cholæmia. Sometimes, when the original growth itself fails to produce these symptoms, they are present and owe their origin to enlargement of the portal glands from secondary deposits. Another but less frequent mechanical effect of the presence of the growth in the head of the gland is that the pancreatic duct is pressed upon and that part of it which is behind the point of pressure dilates. Bright[1] more than sixty years ago pointed out that the motions may in carcinoma of the pancreas contain large quantities of fat; it may be so much that it forms a thick scum, particularly about the edges of the vessel containing the fæces. As blocking of the common bile-duct is very common, and this symptom is so rare, it is probable, as I believe Professor Gairdner teaches, that it is most likely due to the fact that the pancreatic secretion is prevented from reaching the duodenum, and failure to digest fat may perhaps explain what I have noticed—namely, that patients suffering from malignant disease of the pancreas may waste extremely rapidly.

To return to our two cases, remember that they were quite exceptional in the position in the pancreas of the growth and in the absence of secondary infiltration of the portal glands, and that these anatomical peculiarities will explain the absence of the symptoms we have been discussing. Less important symptoms of carcinoma of the pancreas are that the patient usually suffers from constipation due no doubt in many cases to the absence of bile in the intestine. His feet may swell either from pressure of the growth on the vena cava or because he is, like other sufferers from carcinoma, very anæmic. Sometimes it is possible to feel the growth as a hard, tender mass with a transmitted pulsation from the aorta and stomach resonance in front of it, but you should remember that in thin subjects it is occasionally possible to feel the pancreas even when it is not the seat of growth. I have felt it as a hard mass when it has been cirrhotic from backward pressure due to bronchitis. In very rare instances a carcinoma of the pancreas forms a tumour large enough to be seen. The patients do not usually live sufficiently long for the growths secondary to that in the pancreas to produce marked symptoms unless they are in the portal glands. They may occur in any organ, but a usual site is the liver.

Our second case is very uncommon because it is rare for the pancreatic growth not to be in the head of the organ and still more unusual for it to ulcerate into the stomach and kill by hæmatemesis, but we have had other cases at Guy's Hospital in which it has attached itself to neighbouring organs; for instance, it has adhered to the stomach, and in one case under my own care it implicated the secondary part of the duodenum, constricting it and perhaps helping to explain the very severe vomiting and constipation from which the patient suffered. You will find that Bright described a case in which a pancreatic growth ulcerated into the duodenum. Not long ago a patient was admitted for intestinal obstruction due to the adhesion of a pancreatic growth to the colon and I have specimens showing how it may involve the semilunar ganglia, but I do not know that this causes any symptoms.

Neither of our two cases showed any fat necrosis, but you should always look out for it in any form of disease of the pancreas, and we have had an instance at Guy's Hospital of its occurrence in association with pancreatic carcinoma.

The only treatment possible is palliative. Morphia is usually required for the pain, vomiting is often especially difficult to deal with, and you must give the patient all the food he can take.

[1] Transactions of the Royal Medical and Chirurgical Society, vol. xiii., 1833.

CASE OF ACUTE PERFORATIVE APPENDICITIS, FOLLOWED BY SEPTIC PERITONITIS; ABDOMINAL SECTION; RECOVERY.[1]

BY B. G. A. MOYNIHAN, M.S LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE LEEDS GENERAL INFIRMARY.

CASES of recovery after abdominal section performed for acute septic peritonitis, depending upon disease of the vermiform appendix, are sufficiently rare to warrant the publication of any that may occur. In the early part of last year I was fortunate enough to have such a case. The following are the notes. The patient, aged thirteen years, an exceptionally bright and intelligent boy, suffered two years ago from some illness of one week's duration, characterised by abdominal pain, constipation, and a general feeling of languor and sickness, without actual vomiting. From this date until March 29th he was perfectly well in every respect; in, fact, he was an unusually active and healthy lad. On this latter date, March 29th, 1895, he had in the early morning a loose motion with some abdominal discomfort, hardly amounting to pain. From that time he had no action of the bowels, though flatus passed occasionally. Abdominal pain, slight and of only momentary duration on the 29th became on the 30th and 31st a gradually-increasing trouble to him, and on April 1st was very severe and of the nature of intermittent colic, superimposed on a continuing incessant pain. The abdomen gradually distended until the night of March 31st–April 1st, and then meteoric distension of the abdomen developed rapidly in the course of a very few hours. From this time all his symptoms became more pronounced and intensified and the prostration rapidly became progressive. He vomited once only, on March 31st. On April 1st I saw the patient in consultation with Dr. Gott; his condition was then as follows. The patient was lying on his back with the knees doubled up. His face was rather flushed, but pinched and drawn and expressive of constant anxiety and pain. The surface of the body and extremities was of a faint bluish tinge, was rather cold, and had a characteristic clammy feeling. The pulse was rapid and feeble and the temperature was 100·6° F. The tongue was coated. Respiration was quick and very shallow; there was no hiccough. The abdomen was uniformly distended and everywhere tender, though perhaps a little more so in the cæcal region than elsewhere; this side alone was mentioned as having been tender on the previous day, and there Dr. Gott felt a "sausage-like lump," which rendered the region more prominent than the rest of the abdomen. There was no localised resistance in any part of the abdomen. I had in my own mind no doubt that there was fluid in the general peritoneal cavity, and the provisional diagnosis that Dr. Gott and myself arrived at was that there was an acute general peritonitis, dependant probably upon rupture of an abscess cavity formed originally in connexion with the vermiform appendix, and we fixed the time of the rupture as immediately before the onset of the rapid distension. Acting upon this diagnosis I

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society, May, 1895.

proposed to operate by opening first the general peritoneal cavity through the linea alba, cleansing that thoroughly, and then opening up the cæcal region by a separate incision and dealing with whatever I found there. Ether was then administered and I made my first incision through the middle line about midway between the umbilicus and the pubes. On opening the peritoneal cavity a large quantity of curdy-looking, highly offensive pus made its escape. On introducing my finger into the abdomen I was able to make out that there was a moderate-sized collection of pus in Douglas's pouch, and I could feel an opening distinct, though small, which led to an abscess cavity in the neighbourhood of the appendix in the iliac fossa. I then thoroughly cleansed the whole peritoneal cavity, spending time over it and taking pains to ensure that no small collection of pus, hemmed in by adherent coils of intestine, escaped notice. I then put a plug of iodoform gauze through this opening I had found into the cæcal region and incising the abdominal wall above Poupart's ligament I exposed the abscess cavity. Its lining was shreddy, irregular, and in places almost gangrenous, and though I have no doubt that the appendix was the cause of the formation of the abscess I was unable to identify it unmistakeably, and unfortunately, therefore, could not remove it. I cleansed the abscess as perfectly as I could by scraping gently, sponging firmly with iodoform gauze, and flushing with boiled water. I then dusted the whole cavity with a little iodoform, and employed a glass tube to drain the general peritoneal cavity and a stout indiarubber tube to drain the cæcal region. The patient rallied after the operation much better than we either hoped or expected. He remained in bed for nine weeks, and though in danger for perhaps the first sixty hours there was no doubt after that time that the ultimate issue of the case would be satisfactory. The boy is now quite recovered and as healthy and vigorous as ever.

The class of cases similar to the one I have just described is, of course, almost invariably fatal. There is, I think, excluding accidents, no more serious and hopeless abdominal catastrophe that can possibly occur in males. During the whole of the time that I was house surgeon and resident surgical officer at the infirmary there was not a single case of recovery from this condition. Its peculiar and acute malignancy has been recognised by every surgeon who has written upon the subject, and all agree in considering this complication of appendicitis as among the most fatal of abdominal diseases. In fact, till within the last two or three years not a single recovery had, so far as I know, been put on record, and even up to the present time the successful cases in England number only units. But that recovery should be, and will eventually be, the rule instead of the exception, I feel complete confidence. In pondering over the matter I have thought that it might be possible to formulate certain essentials, on the strict observance of which success in dealing with these cases will mainly depend. These essentials I consider to be:—1. Accuracy in early diagnosis. An ordinary case either of appendicular colic or of appendicitis, when well developed, should be, to most men I suppose is, so far as diagnosis is concerned, one of the easiest and most straightforward that can be met with. But every case, however simple its beginning and uneventful its earlier course, should be watched with the closest interest and intelligence, for the prognosis in any case, be it never so simple, in its earlier stage is wholly uncertain. It is generally supposed that appendicitis, or typhlitis as one used to call it, is, in at least 90 per cent. of the cases, attended by no complications, runs a straightforward uneven course, and eventuates in recovery. But the point that I think needs insistence is that there is during, say, the first twenty-four hours no characteristic symptom or train of symptoms which enables us to dissociate the 90 per cent. recoverable cases from the ten in which sequelæ, varying in intensity from the formation of ordinary abscesses to rapid perforation of the appendix, occur. Therefore, I think the first essential to success is a close investigation, and an almost hourly supervision of any case that may seem doubtful in its initial course in order that should any grave complications ensue they may be dealt with without delay. There can, I think, be no question that in the more or less remote past patients were allowed to die without any accurate diagnosis of their condition being made—a diagnosis, I mean, that tallies with and follows as closely as is possible the altering pathological conditions in the lesion. In the case that I have just read the onset of the severer symptoms superadded to those of ordinary appendicitis was almost sudden, and it was doubtless at this time that the perforation of the appendix occurred. 2. Early operative interference—this is an essential which can hardly be emphasised in too marked a degree. In every variety of surgical abdominal disease of an acute nature the doctrine of early operative interference has had a rapidly-increasing number of adherents. In no class of cases is it likely to be of more benefit than in those I am now considering. Operative procedures, when carried out sufficiently early, are practically without any risk; it is only when the expectant treatment has been carried to an illegitimate extent that any serious result is likely to ensue. Dr. Ryerson Fowler, who has compiled an able monograph on appendicitis, says: "As soon as the diagnosis of progressive appendicitis is assured the abdominal cavity should be opened and the appendix removed." American surgeons without exception follow his lead in this respect and their results are, beyond all comparison, better than our own.

A surgeon has very naturally no desire to inflict an unnecessary operation upon a patient, but his difficulty very often lies in deciding at what point in the history of a case operative intervention is either justifiable or demanded. And he will find that whatever course he follows he will have some authority of greater or less trustworthiness to support his method. Certain prominent surgeons of the French School (Reclus of Paris and Schmit of Versailles) recommend that the period of the formation of abscess should be fixed upon as the time of election, and that the pus should simply be evacuated without further treatment of the abscess cavity or removal of the appendix. A very few surgeons and a good many physicians would treat all cases of appendicitis medically, or expectantly, until the case recovered or became so ill that operative measures alone would give any chance of life. These methods of procedure I venture to think are wrong. But as some definite ready rule should be adopted to meet the necessities and the requirements of every case I would suggest that the following is perhaps as useful a one as we can draw up at the present time:—"If at the end of a certain well-defined period a case of appendicitis is either stationary or progressive operative procedures should, without any further delay, be adopted." This period the American surgeons would place at the end of twenty-four hours from the first onset of symptoms. This is perhaps a little early, but if an error it is at least an error in the right direction, for it is assuredly better to operate too early and restore the patient to health than to feel compelled to operate too late and unsuccessfully. 3. Thorough cleansing of both the peritoneal and abscess cavities. And by thorough cleansing I do not necessarily mean the flushing of the peritoneum with boiled water or boracic lotion or the like, for this is a procedure which I look upon with the greatest dread. It is, unfortunately, in some cases absolutely essential, but under no circumstances would I adopt it unless forcibly driven to it. I feel sure that its risks are very greatly under-estimated and by some surgeons not in any degree appreciated. Over and over again I have noticed and pointed out to others the profound shock that occurs in almost every case in which flushing of the peritoneum is adopted. At the time that the flushing is being done a manifest improvement in the general condition of the patient occurs, the respirations are stronger and brisker, and the face and lips ruddier, and the pulse quicker and fuller. After an interval of about half-an-hour a very marked reaction, amounting in some cases to complete collapse, comes on and occasionally ends in death—nominally from "shock," in reality, as I believe, indirectly on account of the peritoneal flushing. Unless the peritoneal cavity is in a very bad condition it can be very effectually cleansed and drained by the insertion of tampons of iodoform or other gauze into all the numerous pouches and recesses wherein pus or serous effusion can lodge. This is a procedure which requires time and patience, but on the perfection of its details depends not seldom the life of the patient. After satisfactory proof is furnished of the cleanliness of the peritoneum a sufficient drainage must be adopted, either by means of a Bantock's tube or, perhaps still better, by means of layers and strips of iodoform gauze placed here and there among the intestines where fluid seems likely to collect.

With regard to the asepticising of the abscess cavity I have only one remark to make, to the effect that, if possible,

pancreas, 3; tubercle of pancreas, 2; dilation of ducts not due to growth, 2; floor of duodenal ulcer formed by pancreas, 1; abscess of pancreas, 1; œdema of pancreas, 1; and ruptured pancreas, 1. We have had one case of hæmorrhagic pancreatitis since this list was drawn up.

The cirrhotic, congested, or hard pancreas was nearly always associated with increased venous pressure due to cardiac, pulmonary, or hepatic disease, and was as far as is known of no clinical interest. In thirteen out of the sixteen cases in which the pancreas was small diabetes was present, and beyond the symptoms of this disease there was during life no evidence that the pancreas was diseased. When this organ was the seat of secondary deposits or hard growths of other organs adherent to it the symptoms of the primary disease quite overshadowed those due to the affection of the pancreas. The fatty pancreas was generally associated with old age, and although pancreatic calculi, pancreatic cysts, and hæmorrhagic pancreatitis are extremely interesting, yet we cannot stop to consider them to-day, and the above list shows that they are so rare in comparison with primary malignant disease that that is the disease of the pancreas most interesting from a clinical point of view. The growth is almost always a scirrhous carcinoma. The medullary variety is rare and sarcoma is excessively rare. The proportion of males to females is two to one, and most patients are somewhere between forty and sixty years old. You will notice our two patients illustrate all these points.

It is extremely important for you to bear in mind that the growth is nearly always in the head of the gland, and as a result of this the common bile-duct is pressed upon, the bile-ducts dilate, the liver becomes enlarged, the gall-bladder is, in at least a third of the cases, distended, and it may be felt as a tumour projecting from underneath the liver, the patient may be jaundiced, his stools clay-coloured, and he may show signs of cholæmia. Sometimes, when the original growth itself fails to produce these symptoms, they are present and owe their origin to enlargement of the portal glands from secondary deposits. Another but less frequent mechanical effect of the presence of the growth in the head of the gland is that the pancreatic duct is pressed upon and that part of it which is behind the point of pressure dilates. Bright[1] more than sixty years ago pointed out that the motions may in carcinoma of the pancreas contain large quantities of fat; it may be so much that it forms a thick scum, particularly about the edges of the vessel containing the fæces. As blocking of the common bile-duct is very common, and this symptom is so rare, it is probable, as I believe Professor Gairdner teaches, that it is most likely due to the fact that the pancreatic secretion is prevented from reaching the duodenum, and failure to digest fat may perhaps explain what I have noticed—namely, that patients suffering from malignant disease of the pancreas may waste extremely rapidly.

To return to our two cases, remember that they were quite exceptional in the position in the pancreas of the growth and in the absence of secondary infiltration of the portal glands, and that these anatomical peculiarities will explain the absence of the symptoms we have been discussing. Less important symptoms of carcinoma of the pancreas are that the patient usually suffers from constipation due no doubt in many cases to the absence of bile in the intestine. His feet may swell either from pressure of the growth on the vena cava or because he is, like other sufferers from carcinoma, very anæmic. Sometimes it is possible to feel the growth as a hard, tender mass with a transmitted pulsation from the aorta and stomach resonance in front of it, but you should remember that in thin subjects it is occasionally possible to feel the pancreas even when it is not the seat of growth. I have felt it as a hard mass when it has been cirrhotic from backward pressure due to bronchitis. In very rare instances a carcinoma of the pancreas forms a tumour large enough to be seen. The patients do not usually live sufficiently long for the growths secondary to that in the pancreas to produce marked symptoms unless they are in the portal glands. They may occur in any organ, but a usual site is the liver.

Our second case is very uncommon because it is rare for the pancreatic growth not to be in the head of the organ and still more unusual for it to ulcerate into the stomach and kill by hæmatemesis, but we have had other cases at Guy's Hospital in which it has attached itself to neighbouring organs; for instance, it has adhered to the stomach, and in one case under my own care it implicated the secondary part of the duodenum, constricting it and perhaps helping to explain the very severe vomiting and constipation from which the patient suffered. You will find that Bright described a case in which a pancreatic growth ulcerated into the duodenum. Not long ago a patient was admitted for intestinal obstruction due to the adhesion of a pancreatic growth to the colon and I have specimens showing how it may involve the semilunar ganglia, but I do not know that this causes any symptoms.

Neither of our two cases showed any fat necrosis, but you should always look out for it in any form of disease of the pancreas, and we have had an instance at Guy's Hospital of its occurrence in association with pancreatic carcinoma.

The only treatment possible is palliative. Morphia is usually required for the pain, vomiting is often especially difficult to deal with, and you must give the patient all the food he can take.

[1] Transactions of the Royal Medical and Chirurgical Society, vol. xiii., 1833.

CASE OF ACUTE PERFORATIVE APPENDICITIS, FOLLOWED BY SEPTIC PERITONITIS; ABDOMINAL SECTION; RECOVERY.[1]

BY B. G. A. MOYNIHAN, M.S LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE LEEDS GENERAL INFIRMARY.

CASES of recovery after abdominal section performed for acute septic peritonitis, depending upon disease of the vermiform appendix, are sufficiently rare to warrant the publication of any that may occur. In the early part of last year I was fortunate enough to have such a case. The following are the notes. The patient, aged thirteen years, an exceptionally bright and intelligent boy, suffered two years ago from some illness of one week's duration, characterised by abdominal pain, constipation, and a general feeling of languor and sickness, without actual vomiting. From this date until March 29th he was perfectly well in every respect; in, fact, he was an unusually active and healthy lad. On this latter date, March 29th, 1895, he had in the early morning a loose motion with some abdominal discomfort, hardly amounting to pain. From that time he had no action of the bowels, though flatus passed occasionally. Abdominal pain, slight and of only momentary duration on the 29th became on the 30th and 31st a gradually-increasing trouble to him, and on April 1st was very severe and of the nature of intermittent colic, superimposed on a continuing incessant pain. The abdomen gradually distended until the night of March 31st–April 1st, and then meteoric distension of the abdomen developed rapidly in the course of a very few hours. From this time all his symptoms became more pronounced and intensified and the prostration rapidly became progressive. He vomited once only, on March 31st. On April 1st I saw the patient in consultation with Dr. Gott; his condition was then as follows. The patient was lying on his back with the knees doubled up. His face was rather flushed, but pinched and drawn and expressive of constant anxiety and pain. The surface of the body and extremities was of a faint bluish tinge, was rather cold, and had a characteristic clammy feeling. The pulse was rapid and feeble and the temperature was 100·6° F. The tongue was coated. Respiration was quick and very shallow; there was no hiccough. The abdomen was uniformly distended and everywhere tender, though perhaps a little more so in the cæcal region than elsewhere; this side alone was mentioned as having been tender on the previous day, and there Dr. Gott felt a "sausage-like lump," which rendered the region more prominent than the rest of the abdomen. There was no localised resistance in any part of the abdomen. I had in my own mind no doubt that there was fluid in the general peritoneal cavity, and the provisional diagnosis that Dr. Gott and myself arrived at was that there was an acute general peritonitis, dependant probably upon rupture of an abscess cavity formed originally in connexion with the vermiform appendix, and we fixed the time of the rupture as immediately before the onset of the rapid distension. Acting upon this diagnosis I

[1] A paper read before the Leeds and West Riding Medico-Chirurgical Society, May, 1895.

proposed to operate by opening first the general peritoneal cavity through the linea alba, cleansing that thoroughly, and then opening up the cæcal region by a separate incision and dealing with whatever I found there. Ether was then administered and I made my first incision through the middle line about midway between the umbilicus and the pubes. On opening the peritoneal cavity a large quantity of curdy-looking, highly offensive pus made its escape. On introducing my finger into the abdomen I was able to make out that there was a moderate-sized collection of pus in Douglas's pouch, and I could feel an opening distinct, though small, which led to an abscess cavity in the neighbourhood of the appendix in the iliac fossa. I then thoroughly cleansed the whole peritoneal cavity, spending time over it and taking pains to ensure that no small collection of pus, hemmed in by adherent coils of intestine, escaped notice. I then put a plug of iodoform gauze through this opening I had found into the cæcal region and incising the abdominal wall above Poupart's ligament I exposed the abscess cavity. Its lining was shreddy, irregular, and in places almost gangrenous, and though I have no doubt that the appendix was the cause of the formation of the abscess I was unable to identify it unmistakeably, and unfortunately, therefore, could not remove it. I cleansed the abscess as perfectly as I could by scraping gently, sponging firmly with iodoform gauze, and flushing with boiled water. I then dusted the whole cavity with a little iodoform, and employed a glass tube to drain the general peritoneal cavity and a stout indiarubber tube to drain the cæcal region. The patient rallied after the operation much better than we either hoped or expected. He remained in bed for nine weeks, and though in danger for perhaps the first sixty hours there was no doubt after that time that the ultimate issue of the case would be satisfactory. The boy is now quite recovered and as healthy and vigorous as ever.

The class of cases similar to the one I have just described is, of course, almost invariably fatal. There is, I think, excluding accidents, no more serious and hopeless abdominal catastrophe that can possibly occur in males. During the whole of the time that I was house surgeon and resident surgical officer at the infirmary there was not a single case of recovery from this condition. Its peculiar and acute malignancy has been recognised by every surgeon who has written upon the subject, and all agree in considering this complication of appendicitis as among the most fatal of abdominal diseases. In fact, till within the last two or three years not a single recovery had, so far as I know, been put on record, and even up to the present time the successful cases in England number only units. But that recovery should be, and will eventually be, the rule instead of the exception, I feel complete confidence. In pondering over the matter I have thought that it might be possible to formulate certain essentials, on the strict observance of which success in dealing with these cases will mainly depend. These essentials I consider to be:—1. Accuracy in early diagnosis. An ordinary case either of appendicular colic or of appendicitis, when well developed, should be, to most men I suppose is, so far as diagnosis is concerned, one of the easiest and most straightforward that can be met with. But every case, however simple its beginning and uneventful its earlier course, should be watched with the closest interest and intelligence, for the prognosis in any case, be it never so simple, in its earlier stage is wholly uncertain. It is generally supposed that appendicitis, or typhlitis as one used to call it, is, in at least 90 per cent. of the cases, attended by no complications, runs a straightforward uneven course, and eventuates in recovery. But the point that I think needs insistence is that there is during, say, the first twenty-four hours no characteristic symptom or train of symptoms which enables us to dissociate the 90 per cent. recoverable cases from the ten in which sequelæ, varying in intensity from the formation of ordinary abscesses to rapid perforation of the appendix, occur. Therefore, I think the first essential to success is a close investigation, and an almost hourly supervision of any case that may seem doubtful in its initial course in order that should any grave complications ensue they may be dealt with without delay. There can, I think, be no question that in the more or less remote past patients were allowed to die without any accurate diagnosis of their condition being made—a diagnosis, I mean, that tallies with and follows as closely as is possible the altering pathological conditions in the lesion. In the case that I have just read the onset of the severer symptoms superadded to those of ordinary appendicitis was almost sudden, and it was doubtless at this time that the perforation of the appendix occurred. 2. Early operative interference—this is an essential which can hardly be emphasised in too marked a degree. In every variety of surgical abdominal disease of an acute nature the doctrine of early operative interference has had a rapidly-increasing number of adherents. In no class of cases is it likely to be of more benefit than in those I am now considering. Operative procedures, when carried out sufficiently early, are practically without any risk; it is only when the expectant treatment has been carried to an illegitimate extent that any serious result is likely to ensue. Dr. Ryerson Fowler, who has compiled an able monograph on appendicitis, says: "As soon as the diagnosis of progressive appendicitis is assured the abdominal cavity should be opened and the appendix removed." American surgeons without exception follow his lead in this respect and their results are, beyond all comparison, better than our own.

A surgeon has very naturally no desire to inflict an unnecessary operation upon a patient, but his difficulty very often lies in deciding at what point in the history of a case operative intervention is either justifiable or demanded. And he will find that whatever course he follows he will have some authority of greater or less trustworthiness to support his method. Certain prominent surgeons of the French School (Reclus of Paris and Schmit of Versailles) recommend that the period of the formation of abscess should be fixed upon as the time of election, and that the pus should simply be evacuated without further treatment of the abscess cavity or removal of the appendix. A very few surgeons and a good many physicians would treat all cases of appendicitis medically, or expectantly, until the case recovered or became so ill that operative measures alone would give any chance of life. These methods of procedure I venture to think are wrong. But as some definite ready rule should be adopted to meet the necessities and the requirements of every case I would suggest that the following is perhaps as useful a one as we can draw up at the present time:—"If at the end of a certain well-defined period a case of appendicitis is either stationary or progressive operative procedures should, without any further delay, be adopted." This period the American surgeons would place at the end of twenty-four hours from the first onset of symptoms. This is perhaps a little early, but if an error it is at least an error in the right direction, for it is assuredly better to operate too early and restore the patient to health than to feel compelled to operate too late and unsuccessfully. 3. Thorough cleansing of both the peritoneal and abscess cavities. And by thorough cleansing I do not necessarily mean the flushing of the peritoneum with boiled water or boracic lotion or the like, for this is a procedure which I look upon with the greatest dread. It is, unfortunately, in some cases absolutely essential, but under no circumstances would I adopt it unless forcibly driven to it. I feel sure that its risks are very greatly under-estimated and by some surgeons not in any degree appreciated. Over and over again I have noticed and pointed out to others the profound shock that occurs in almost every case in which flushing of the peritoneum is adopted. At the time that the flushing is being done a manifest improvement in the general condition of the patient occurs, the respirations are stronger and brisker, and the face and lips ruddier, and the pulse quicker and fuller. After an interval of about half-an-hour a very marked reaction, amounting in some cases to complete collapse, comes on and occasionally ends in death—nominally from "shock," in reality, as I believe, indirectly on account of the peritoneal flushing. Unless the peritoneal cavity is in a very bad condition it can be very effectually cleansed and drained by the insertion of tampons of iodoform or other gauze into all the numerous pouches and recesses wherein pus or serous effusion can lodge. This is a procedure which requires time and patience, but on the perfection of its details depends not seldom the life of the patient. After satisfactory proof is furnished of the cleanliness of the peritoneum a sufficient drainage must be adopted, either by means of a Bantock's tube or, perhaps still better, by means of layers and strips of iodoform gauze placed here and there among the intestines where fluid seems likely to collect.

With regard to the asepticising of the abscess cavity I have only one remark to make, to the effect that, if possible,

the appendix, or at least the faulty portion of it, should be removed. Not a few cases are on record where, after the opening and draining of an appendicular abscess had been performed, further attacks of appendicitis have occurred, terminating in at least one case fatally. The treatment, then, in cases of appendicitis may be briefly summarised in this way:—(1) Make an early diagnosis; (2) if at the end of, say, twenty-four hours the symptoms are not retrogressing operate at once; (3) if the case is first seen when abscess has formed do not be content with merely opening and draining the cavity, but, if possible, remove the appendix as well; and (4) if the case be not seen until an early diagnosis of perforation has been made operate immediately, cleansing thoroughly, but avoiding, if possible, lavage of the peritoneum. If this method of treatment be efficiently carried out I believe that a larger percentage of cases will recover than ever before, and that every patient who has recovered will be exempt from any similar attacks in the future. This boy is now in perfectly good health.

Leeds.

THE ASSOCIATED STUDY OF CRIME AND INSANITY.

BY EDWIN GOODALL, M.D., B.S., M.R.C.P.LOND.,

MEDICAL SUPERINTENDENT, JOINT COUNTIES ASYLUM, CARMARTHEN.

IN the report of the Departmental Committee on Prisons (1895), on certain questions relating to the administration of prisons and the general treatment of prisoners, there are recommendations made with the object of facilitating and promoting the study and detection of insanity amongst criminals and prisoners generally. If it is desirable that the prison medical officer should have some experience of the insane, for considerations of a theoretical and practical (humanitarian) kind, it would appear equally proper, from a theoretical standpoint—although, perhaps, for no practical considerations of an immediate kind—that the asylum medical officer should have some knowledge of criminals and malefactors in general. Working apart, each in ignorance of the other's labours, there is, perchance, some danger lest alienist and criminologist should leave intact the root of the neurotic tree whilst they are busily engaged in lopping off its branches. Reflecting on these lines, it seems strange that the study of crime should have been so dissociated from that of insanity. This separation, I conceive, is ascribable to the predominance of the legal over the medical view of crime, being in fact, the practical expression of the jurist's desire for order and precision, for definition. Whilst Psychology stood irresolute, debating the subtle question of responsibility and irresponsibility, Law stepped in, established a working principle, and in accordance therewith erected the prison and the asylum. The malefactor and the lunatic have been legally differentiated and—if one may so put it—pigeon-holed accordingly. But this differentiation of the criminal from his degenerate *confrère* has, in the medical view, been wrongly based upon the nature of the offence committed against society, not sufficient regard having been paid to the offender. Individuals have thus frequently been allocated to the gaol whose proper destination was the asylum, where they later have arrived. Even if they were properly consigned in the first instance to prison there is the risk that the system of "education" adopted will be too strictly primitive, so that the criminal will leave gaol at the expiration of his sentence as anti-social as before, and possibly more so. Further, in the anxiety to classify and draw sharp distinctions the borderland cases—the mentally depreciated (Dr. Jules Morel)—who are not, however, wholly irresponsible, have been overlooked. With reference to these it is satisfactory to note that the report of the Committee recommends that as far as possible weak-minded prisoners should be concentrated in special prisons under special medical supervision, and "it should be considered whether it is right to treat such persons as ordinary criminals."

Recently attempts have been made to show that the prison system is productive of insanity and that a considerable amount of the insanity recorded in prisons is due to the treatment therein received. An unbiased inquiry into the cases so recorded would probably show that in the vast majority the insanity manifested itself shortly after admission; in other words, that in the great majority of the cases the individual was either actually insane or a candidate for insanity on admission to gaol. The Memorandum on Insanity in Prisons which accompanies the report of the Departmental Committee deals with 354 cases of insanity in local prisons in a given year. Out of these it is estimated that only forty-two were sane at the time of admission, becoming insane more than a month afterwards. And for my part, after reading the abstracts of the reports in these cases, I believe that no more than a dozen, approximately, could be regarded as sane on admission. Given, however, the predisposition to mental breakdown the catastrophe would doubtless in many cases be precipitated by such measures as solitary confinement, a limited amount of exercise, and low diet. Prominent amongst irresponsible persons who arrive in prison in consequence of the excessive regard paid to the offence and the inadequate estimate of the offender is the general paralytic in an early stage. In the absence of expert supervision of gaols his malady is likely enough to be overlooked. I am confident that the justice of this statement would be borne out by the experience of every county asylum receiving cases from gaol. Dr. Jules Morel informs me that epileptics are often discovered in the Belgian prisons by the alienist experts attached thereto—a statement we should be quite prepared to hear, as it accords with experience of transfers from gaol to asylum in this country.

One of the chief recommendations, in my opinion, of the Departmental Committee is to the effect that candidates for medical appointments in prisons should be required to show that they have given special attention to lunacy—a recommendation so obviously desirable that one is curious to learn whether it is now brought forward for the first time. Doubtless it was based upon the evidence given by the medical experts called before the Committee, one of whom, indeed, went far beyond this comparatively modest suggestion in respect to the medical officer, maintaining, in fact, that the treatment of prisoners is very much allied to that of lunatics, and is essentially a medical affair. "Crime is a medical question"; such is the view of this witness, who considers that the principal officer of the gaol should be a medical man, just as in the case of an asylum. In this connexion it may be remarked that the insane have undoubtedly been better cared for since medical men were put at the head of asylums.

With regard to the general subject of the study of insanity in prisons, it may be observed that in this respect we do not lag behind the Continent, for it does not appear that any special provision is made for such study in any of the Continental states. In Belgium, however, a more enlightened system, in my opinion, is followed in respect to the detection and treatment of insanity amongst prisoners than in any other State in Europe. According to information derived from Dr. Jules Morel, of the Hospice Guislain, Ghent—who has advocated the adoption of the Belgian system in his visits to this country—the procedure there in force was introduced some five years since by M. Jules Lejeune, ex-Minister of Justice, a highly appreciated *savant*, who ascertained by numerous official reports that there was good reason to believe there were many insane persons in prisons. At that time there was no alienist service in prisons. The Belgian procedure is briefly as follows. Three alienists are attached to the prison, each having under his care nearly ten prisons. A case of suspected insanity is notified by the governor of the prison to the expert attached thereto. The patient is forthwith visited. If it appears that recovery will occur quickly, or if the case, although of chronic nature, is harmless to himself and his surroundings, treatment is undertaken in the prison; but if the patient is in any way dangerous he is removed to the asylum. These steps are taken independently of the prison medical officer, who, if the alienist lives at a distance, is required to see that the treatment prescribed by the latter is properly carried out. The alienist likewise acts in entire official independence of the governor, and sends his reports direct to the Minister of Justice. The Belgian procedure appears to me to be highly commendable as emphasising in a practical manner the need for cöoperation between the gaol and asylum services. The separation of these services in this country is, in my opinion, fundamentally wrong, being unphilosophical because it ignores the connexion existing between the two great degenerations—crime and insanity. We might as well maintain separate and distinct institutions for the study and treatment of different disorders or degenerations of any particular organ other than the

brain as maintain asylums and prisons so wholly apart. The inconveniences of such separation are the same in nature—though not the same, it might be conceded, in degree—as those which would arise were the surgical and medical departments of a hospital divorced entirely the one from the other and placed under different jurisdictions.

As a practical result of the disunion of asylum and prison administrations we find that there is very little interchange of views between the respective medical officers, but instead absence of coöperation and mutual interest. This is a regrettable state of affairs, for surely such coöperation should be the basis of the studies through which we may hope to stay the propagation and to mitigate the evils of the degenerations in question. Alike in asylums and prisons there is danger lest medical officers should lose the light of research in the murkiness of administrative detail. In asylums, however, a considerable amount of investigation work is now, and has for some time been, in progress. I would not venture to state to what extent the authorities in prisons have adopted the enlightened views of many asylum committees in respect to the encouragement of research, or to surmise in what degree we may in the near future expect contributions in the domain of criminal anthropology which shall be the equal of those we are now accustomed to receive from the Continent. If it be the fact, as I am informed from sources which I deem trustworthy, that no necropsy, meaning thereby cutting the body or opening its cavities, is ever made on an executed criminal (this restriction would, of course, preclude examination of the brain or its preservation for museum purposes), and that it is not permitted even to take a cast of the head in such a case, there would appear to be ample opportunity for the cultivation of a more modern and progressive spirit in the prison service. It is scarcely credible that such conditions—grave, as connoting lack of encouragement of research—should obtain. In Italy, according to information kindly furnished by Professor Lombroso, the Government passed a law some twelve years ago authorising those engaged in medico-legal work at the University of the town in which a prison is situated to make necropsies upon all criminals unless their families objected (a proviso quite unnecessary in my opinion). As regards Austria-Hungary Professor Benedikt informs me that there is no question of forbidding necropsies in the case of criminals. He has himself published[1] anthropological studies of the brains and crania of such from the Hoffmann collection (made in Austria). But although our knowledge in the domain of criminal anthropology has been derived, one may say, almost wholly from Continental sources, even on the Continent the study of the criminal has been kept too much apart from that of the lunatic. Alike abroad and at home the question arises whether it would not be advantageous to associate with each other the prison and the asylum services, in order that crime and insanity may be studied side by side.

Carmarthen.

NOTES ON AN ABORTIVE ATTACK OF TYPHOID FEVER IN A PATIENT WHO HAD PREVIOUSLY SUFFERED FROM THAT DISEASE,

THE ATTACK BEING USHERED IN BY AN OUTBREAK OF HERPES ZOSTER IN THE SEGMENTAL AREA OF DISTRIBUTION OF THE TWELFTH DORSAL NERVE.

BY MAURICE EDEN PAUL, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

THE patient was a man aged fifty-two years. The illness began on Aug. 12th, 1895, with the outbreak of a rash on the lower part of the back and abdomen. This was followed by pain in the abdomen and by constipation. On the afternoon of the 15th he felt feverish and had a little headache. I first saw him on Aug. 16th. He then had a well-marked eruption of herpes zoster consisting of grouped vesicles and bullæ on an inflamed base. The eruption began at the mid-line behind at the level of the upper lumbar spine, ran forwards below the iliac crest on the right side, across the lower part of the front of the abdomen and across the top of the right thigh, extending downwards as much as three inches below Poupart's ligament and inwards to the antero-internal border of the thigh. The penis and the scrotum were free from the eruption. In the evening the patient's temperature was 102·8° F., having been 100·4° in the morning. He had severe frontal headache. His tongue was furred but moist. There were two or three rose-coloured papules on the abdomen. The bowels were confined. The temperature on the 16th was 100·5° in the morning and 102·8° in the evening, falling to 100·8° on the following morning, but rising to 101·4° in the evening. On Aug. 18th there was still obstinate constipation. There was enlargement of the area of splenic dulness, but the spleen was not palpable. The tongue was thickly furred. Severe frontal headache continued. On the 17th and the 18th characteristic papules of typhoid roseola, numbering about twenty in all, continued to appear on the chest and the abdomen, and though the fever was already on the decline there could be no doubt as to the diagnosis of typhoid fever. On the 21st the fever was almost gone, the headache had subsided, and the tongue was cleaning. The patient was suffering, as he had suffered since the appearance of the herpes zoster, from an aching pain in the side and the abdomen corresponding in site with the distribution of the eruption. The pain was sufficiently severe to keep him awake at night. On the 22nd the temperature came down to normal in the morning, but it continued for some days after this, as long as the patient was under observation, to rise to about 99·5° every evening. Short as the attack had been it left considerable weakness, and it was more than a fortnight after the decline of the fever before the patient was well enough to go away for change of air. Five weeks from the onset of his illness—he was quite well except for occasional aching pain in the side.

Remarks.—This case appears to me to be noteworthy in several respects. First, it was a second attack of typhoid fever. The patient had an ordinary attack of typhoid fever of several weeks' duration while resident in this port thirty years ago. The history, at any rate, leaves little doubt that the former illness was typhoid fever, and it was diagnosed as such by his medical attendant. Secondly, the case offers a well-marked instance of an abortive attack of typhoid fever. Prior to Aug. 16th the patient was unquestionably in excellent health, so that the total duration of the fever did not exceed nine days. This case did not present the definite onset with rigor that is said to be in some degree characteristic of abortive typhoid fever, but there was the early appearance of the rose spots that is usually noted in this type of the disease. They were present when I first saw the patient on the fourth day of the illness. I do not think attention has been directed to the question whether abortive attacks of typhoid fever are more frequently met with in patients who have previously passed through an attack of the disease. This is a point worth investigation. I may mention in passing that this was an isolated case of typhoid fever. No one else was ill in the patient's house, nor were any other members of the European community at this time affected with typhoid fever. The large towns of Japan are, however, rarely if ever free from the disease. Thirdly, the association with herpes zoster is interesting and one I do not remember to have seen previously noted. It may, of course, have been fortuitous; and if it was not so I am not prepared to offer any suggestion as to the nature of the connexion. Fourthly, I wish to draw attention to the area of distribution of the zoster. It does not correspond with the distribution of any one, or indeed of any two or three, of the cutaneous nerves. The cutaneous areas of the posterior primary division of the last dorsal nerve, the lateral cutaneous branch of the last dorsal nerve, the ilio-hypogastric, the ilio-inguinal, the genito-crural, and the external cutaneous nerves were all partially invaded by the eruption. But it corresponds very closely with the segmental area of cutaneous distribution of the twelfth dorsal nerve-root, as may be seen by reference to the plates on pp. 346, 347 of the section on the Nerves in the tenth edition of Quain's Anatomy. The cutaneous inflammation must therefore have been consequent upon an affection of the posterior root of the twelfth dorsal nerve or of the portion of the cord that this root enters, and not to any neuritis of peripheral nerves. In cases in which the cause of herpes zoster can be ascertained it is usually found to be the result of a neuritis of a dorsal posterior root ganglion or of the root between the cord and the ganglion. In this way its hemi-segmental distribution is

[1] Les Grands Criminels de Vienne. Benedikt.

explained. It is often said that herpes zoster affects one of the intercostal nerves, but this statement is incomplete for most cases, for the rash usually extends from the middle of the body in front to the spine behind, on the area of distribution of the posterior primary as well as on that of the anterior primary branch of one of the dorsal nerves. It is not often, however, that the central origin and segmental distribution of herpes zoster is so well shown as in the case I have just recorded, where the affected fibres must have traversed several cutaneous nerves before uniting to form a zone on the skin.

Nagasaki, Japan.

ON VARIOUS FORMS OF TALIPES AS DEPICTED BY X RAYS.[1]

BY RICHARD BARWELL, F.R.C.S. ENG.,
CONSULTING SURGEON TO CHARING-CROSS HOSPITAL.

(Continued from p. 1522.)

TALIPES varus, whose bony anatomy as revealed by skiagram was the subject of my last paper, should, when congenital, be treated as soon after birth as possible. The slighter degrees of that deformity—degrees in which neither deformation nor displacement of bone has reached the extent shown by Figs. 9 and 10 in my last paper—may at that time be rapidly corrected by twisting the foot manually into a normal position and so fixing it in a poroplastic splint. It is advantageous to begin by rubbing the foot with oil and then steeping it for fifteen or twenty minutes in water as hot as can be used without injury to the very delicate skin; the oil by preventing actual contact of the water permits the use of a rather higher temperature, while the heat so relaxes fibrous and muscular tissues that they offer less resistance. The splint should be so cut that the leg portion reaches to the head of the fibula, while the foot portion comes well under the sole; both parts should embrace as much of the limb as is compatible with pretty facile removal. For an extremity so infantile will not bear continuous imprisonment, and the appliance should be removed in the slighter cases daily, and in rather more severe ones twice a day, the extremity rubbed, turned into, or rather beyond, the normal position, and the splint replaced; often, too, a fresh soaking or sponging with hot water is desirable. But if there be also considerable equinus, to such a degree that it cannot be rectified or nearly rectified with the hand, much time (an important factor) is saved by division of the Achilles tendon either as a first step in, or shortly after the commencement of, this treatment. I prefer the former method because establishment of a good position in both posterior and anterior tarsus is then easier and because a splint with foot- and leg-piece at right angles to each other can at once be moulded; whereas if the latter course be adopted either a new splint or a re-moulding of the original one will be required. A goodly proportion of feet born with varus can thus be entirely rectified; others only so far as to appear, until the infant begins to "feel his feet," quite straight; but then he will probably put it down on the outer side, when of course the body weight will tend to reproduce the deformity. Yet if the nurse will take care always to turn the extremity sole-downward the weight so disposed aids in the cure. The task, however, is exacting and is sometimes, as for very lively or fractious infants, impossible, when extraneous aid may advantageously be substituted; and I am unacquainted with any means so good as my original plan of supplementing the weakened muscles by indiarubber springs secured in their place with strapping plaster. By stretching the springs proportionally to, but not beyond, the required tension they aid but do not, like stiff shoes and screw-forced irons, over ride the muscles; therefore they strengthen instead of weakening those organs. The appliance is not so troublesome as some writers seem to imagine if the details given in my book[2] be duly carried out. Removal and renewal of the foot portion (not of the leg part) must, like all appliances to so juvenile an extremity, be pretty frequent. The muscles to be thus aided in varus are the peronei; it must be remembered (sometimes the point appears to be overlooked) that the springs cannot, and are not intended to, uphold the body-weight if it fall on the outer border of the foot; hence in such case the outer edge of the sole and heel of the boot should be thicker than the inner one.

More severe cases, those that have been left untreated till a later period, and more especially those that have walked upon the deformed foot, require stronger methods of treatment. Those that are at present practised may be thus divided: (1) section of contractured tendons and ligaments; (2) removal of certain bones or parts of bones; and (3) breaking or crushing the tarsus by powerful levers or screws. Of the last it may at once be said that the anatomical locality on which the violence falls is not sufficiently precise, nor have I been at all tempted, by such results as I have seen, to adopt the method. The first two devices are in a different category, for although unnecessary section is to be deprecated, yet cases constantly arise in which it is impossible to confer on the patient a useful foot—that is, to overcome the mal-position of tarsal bones—without pretty free section of tendons and ligaments. Other cases are marked by such osseous malformity that removal, partial or total, of one or more tarsal bones seems absolutely necessary to overcome the rotation and adduction of the anterior tarsus. Section of tendons and ligaments may be effected by the subcutaneous or by the open method. Whenever the parts to be divided can be safely reached with a tenotome, no advantage is secured by making a wide skin wound, subsequent contraction of which may to some extent undo the benefits of the tenotomy. Nevertheless, even when only a skin puncture is contemplated the part should be fully asepticised. If the reader will kindly refer to Figs. 9 and 10 in my last paper,[3] and will mentally picture the condition of fibrous parts holding the bones in their subluxated or completely luxated condition, he will be readily able to follow the annexed description of the methods best to be pursued. In Fig. 10 the scaphoid is seen lying on the inner aspect of the astragaloid neck and much too close to the inner malleolus; it is bound there partly by the shortened tendons of the anterior and posterior tibials and partly by contractured ligaments consisting of a matting together of the external astragalo-scaphoid and of the anterior fibres of the deltoid. All these can be divided subcutaneously by introducing the tenotome just inside the tendon of the extensor longus digitorum and carrying it downward and inward to a point a little below the malleolus and beyond the tendon of the posterior tibial. The weapon, whose edge at its introduction looks forward, should now be so turned that the edge faces the deep surface of the skin. An assistant strongly abducts and dorso-extends the anterior tarsus, when all these parts may be severed if not with one then with two movements of the blade; it is wise, however, not to remove the instrument from the skin puncture until the surgeon has with the left index finger verified the absence of any retentive bands which may have escaped the edge. It is necessary that the operator should know that in this varous posture of the foot the anterior tibial tendon has very much changed its place and lies no longer on the anterior, but on the inner surface of the tibia, and that therefore just beyond the tip of the malleolus it is abnormally close to the tendon of the posterior tibial. This same sort of change in position affects also parts in the sole of the foot, whither the operator's attention should next be directed. The inner edge of the plantar fascia, for instance, lies a considerable distance internally to the bones; it is, in fact, stretched like a bow string between the adducted os calcis and anterior tarsus; the same may be said of the plantar muscles and ligaments. In dividing these a point opposite, or rather a little in front of, the tubercle of the scaphoid should be chosen, and while the foot is as far as possible abducted a strong tenotome should be glided in on the deep surface of the plantar fascia; the edge directed forward, then turned to the surface, and all the inner border of that tissue divided by a steady, even movement, as if for withdrawal of the blade, which however is not to be removed out of the skin puncture. On the contrary, it is now to be held almost perpendicular to the surface, passed in gently till felt to touch the bone, and then is directed across the foot to its outer edge, passing more deeply than the internal plantar artery and nerve—that is, between those parts and the tarsal bones, whereby they escape division,[4] for the edge being turned

[1] The skiagrams are taken by Mr. Sydney Rowland, late Shuter Scholar, St. Bartholomew's Hospital.

[2] Cure of Club-foot.

[3] THE LANCET, Nov. 28th, 1896.

[4] These have in many instances been divided, and, indeed, some believe without injurious effect; but I think it better to avoid such severance, as although the artery is insignificant the rather large nerve supplies a considerable portion of the foot.

towards the bones severance is effected by cutting towards, and down to, them. Certain tendons, besides those already named, may—though, in my opinion, very rarely—require division; it happens in some cases immediately after section of the two tibials, and while the foot is still strongly abducted, that the extensores longus digitorum and hallucis, one or both, spring into prominence. Even if that do not occur, yet after the last described sections, since they permit greater rectification, such projection should be looked for, and if it be strongly marked those tendons may also be divided. It must be remembered that the relative position of parts is in varus a good deal changed, and the exact position of artery and nerve is in these severe cases somewhat doubtful. I prefer, therefore, to divide the tendons lower down, a little behind the level of the medio-tarsal joint. The extensor of the toes is just there dividing into its separate slips, and by bending the phalanges can be readily made prominent; the tenotome should be glided beneath them from the inner side. The extensor of the great toe can then be divided from the same puncture by turning the point in the opposite direction; it should not be sunk too deeply, and the position of the artery should first be made out; its beat can nearly always be felt. The two parts (artery and tendon) are in varus further from one another than in the normal foot. Always when equinus is combined with varus the Achilles tendon must be divided. Some prefer to do this at the beginning of the operation. I defer it to this later stage, finding that while the tendon is entire one has greater power in making dorso-extension of the foot. Division of the posterior ligament of the ankle-joint is not, as far as my experience goes, necessary; that structure is an ill-defined web of weak fibrous tissue, nor on dissection of equinus have I found it appreciably thickened. Moreover, it is so covered by the posterior tibial vessels and nerves on the inner side, and by the long flexor of the great toe running somewhat obliquely across its middle, that even after perforating the tendo Achillis (Mr. Parker's method) only a very small part of the structure is accessible to the spear-headed tenotome. After division of these several parts manual force may be applied to rectify the position, and the foot, while thus held, is enveloped in a plaster-of-Paris bandage. I prefer holding the extremity in my own hands while the bandage is applied by my assistant. Everyone may not be able to judge of the desirable position, while every dresser, more especially when under the surgeon's direction, can put a good bandage on a limb that is held for him in its proper position. A regrettable circumstance both for patient and surgeon is it when, after these sections, and even after freer ones,[5] the foot still refuses to come straight. Such cases do occur, however, and in very severe deformity the patient or the parents should be prepared for the event. When such arise section or removal of a tarsal bone, or parts of several bones, may be the only resource. If such an operation has to be performed it had better be done at once—that is to say, as soon as impossibility of restoring something like a normal shape to the foot has been quite clearly proved.

There is a large number of operations from which to choose. Excision of the cuboid alone appears to be rather detrimental than otherwise. I was present at the first of these in 1854 by Mr. Solly. The result was not encouraging. Mere linear section of the tarsus will rectify a severe deformity hardly more than can be done by division of tendons and ligaments as above indicated. Removal of a wedge thicker on the upper and on the outer aspects than on the inner and on the lower affords fairly good results. The first conception and performance is due to Mr. Davies-Colley. Afterwards Mr. Richard Davy advocated it warmly and more fully described its method. The great difficulty is so to plan the form and amount to be removed as to avoid the ablation of successive slices and still worse the removal at once of a portion unnecessarily large. On the outer convex border an incision commensurate with the size of the foot is made down to the bones, and from its centre one much shorter but of equal depth on the proper plantar aspect. Opposite to the former and on the inner or concave aspect a third incision from half to three-quarters of an inch long is made. A raspatory used very gently, sometimes from the inner and sometimes from the outer wound, separates all the soft parts from the dorsal aspect of the bones. I have always been accustomed at this stage to pass a short piece of bandage as broad as the inner incision is long across the dorsum and between the soft parts and the tarsus; the centre of this bandage lies on the bones, the ends protrude from either wound and are confided to an assistant who by gentle traction lifts all the soft parts away, and thus by giving more room greatly facilitates the subsequent procedures. These consist of cutting the wedge from the tarsus by making either with a narrow-bladed or chain saw two sections, one a little behind the other. I prefer, indeed, to cut not quite through the bones, but to leave a thin shell below which yields to the slightest pressure. The place and direction of the sections must be carefully and judiciously chosen, and here the use of good skiagrams will doubtless be found invaluable; nevertheless, even when full advantage is taken of their aid it may sometimes be necessary to take away some additional bone; occasionally a mere projecting corner is found to be the real obstacle, sometimes a rather larger piece; sometimes when the foot will not quite at first come straight continued traction on the front portion will enable the surgeon to place it in good position. The Esmarch cord being then removed and all bleeding vessels secured, the wound should be thoroughly washed with some antiseptic solution by means of a syringe giving a stream sufficiently powerful to wash away any bony detritus left by the saw. The dressing and application of a plaster bandage, a window being left over the wound, follow the usual lines. The result should be good.

A few days since I chanced to see a man on whom I had performed this operation eighteen years ago, when he was twenty-one years old. When he, as arranged, called upon me it was so dark that it was extremely difficult to obtain a negative; development of the plate had to be much forced and was therefore somewhat irregular. Certain defects in the annexed figure (Fig. 11) will therefore,

FIG. 11.[6]

Talipes varus. Tarsectomy performed in 1878. Photographed in November, 1896.

it is hoped, be pardoned, since it is presented, not as photographic, but as an operative success. As a child he had been taken to Guy's Hospital, but his parents declined to submit him to the measures there proposed. He, on account of extreme lameness, had been unable to obtain a living till Mr. Corner put him under my care in Charing-cross Hospital. Since leaving that institution he has, to use his own words, "knocked about everywhere and anywhere," earning a good living for self, wife, and family. The foot is in excellent position, being, however, about three-quarters of an inch shorter than the other. With his work behind the counter and his walks, frequently of many miles, he is often on his feet from sixteen to eighteen hours a day without pain or discomfort. Indeed, in order to call upon me he had walked from Aldgate to Wimpole-street.

Removal of the whole astragalus carries the field of operation beyond the district of desirable interference. I have, however, secured excellent results by removing the head and

[5] Several very extensive sections are here passed over in silence, some because I consider them inadvisable, and others because they can only be very rarely required. Thus, division subcutaneously or by open wound of all soft parts down to the bones, or of these together with all parts behind the ankle save the peronei tendons (Buchanan, Lane, Phelps, and others) must be left without mention in the text.

[6] The very uneven-looking surface and irregular lights and shadows are due to a photographic mishap. The writer believes that a cast of the foot previous to operation is at the Poplar Hospital.

part of the neck of that bone. A semi-circular incision with convexity outwards is made half round its easily distinguished projection; this should fall outside the extensor tendons except the peroneus tertius. Turning back the flap exposes the head of that bone and part of the scaphoid and now the astragalo-scaphoid capsule is to be divided; the extensores longus digitorum and hallucis should be uncovered and held aside while the horns of the incision are somewhat prolonged, so that the scaphoid comes more fully into view, thus permitting section of the two tibial tendons. All fibres uniting the scaphoid to the astragalus are severed by passing the knife between those bones while the anterior tarsus is strongly abducted; a like proceeding separates all attachments between that latter bone and the os calcis. In quite young subjects the astragalus-neck can without difficulty be divided with a strong scalpel and in older ones by a chisel. The head is then grasped in strong forceps, which, aided by gentle severance of fibrous bands with a scalpel, is easily eliminated. The upper surface of the calcaneo-scaphoid ligament is now visible; this should be divided by a succession of cautious touches of the knife, while an assistant finds as the band yields that he can more and more easily abduct the front of the foot. The tendo Achillis will also in most cases require division. In all but very remarkably severe forms of varus there will now be no obstacle to placing the foot in a straight position. After a sufficient number of days in plaster some solid tissue fills the gap left by the removed portion of bone, and, indeed, after a time this new tissue appears to become ossified. I say appears because I have never had the opportunity of a pathological examination, and therefore can only assert that the structure taking the place of the removed portion feels to the touch as hard as bone. However successful one or other of these operations may be it is not advisable to undertake them too lightly. When dealing with babies it is certainly desirable, even by means of tarsectomy if absolutely necessary, to secure a good position with as little loss of time as possible. When we have to do with the larger feet of adults removal of any part of the tarsus should certainly not be suggested until all other resources have been tried; for much may be done, if not to confer an elegant, to secure at least a very useful, foot. For instance, rather more than two years ago I saw with Mr. Hobson a man about thirty-four years of age who had congenital varus. Of late years his foot had become more and more painful, so that though his tastes and avocations were athletic and sporting he could not walk a hundred yards without such pain that not only his foot, which was covered with huge tender corns, but his whole body perspired profusely. I divided the fasciæ, ligaments, and the necessary tendons as described in the earlier part of this paper, and after treatment by plaster-of-Paris used the spring shoe depicted in a previous article.[7] He began almost at once to lose the pain, the corns slowly exfoliated and disappeared, he places the foot almost on the sole, and in the beginning of this September walked, shooting, from twelve to thirteen miles without pain or much fatigue. The calf is developing, and though, in fact, absent when I first saw him is now very fairly prominent.

Wimpole-street, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

DISPLACED CRYSTALLINE LENS FLOATING FREELY IN THE VITREOUS CHAMBER; EXTRACTION; RECOVERY.

(Under the care of Mr. C. HIGGENS.)

DISLOCATION of the lens into the vitreous is less frequently seen than a displacement forwards into the anterior chamber. The symptoms of such a displacement are well known, and the interest of this case lies in the success which attended the operation for removal of the lens. In a recent surgical work[1] it is stated that "a lens lying in the vitreous can rarely be extracted with safety to the eye"; whilst one of our smaller text-books on diseases of the eye does not mention the occurrence of this displacement. Knapp[2] has published notes of two cases of dislocation of the lens into the vitreous, in which extraction was successfully accomplished by first making an upper corneal section and then expelling the lens by methodical external pressure in the ordinary manner, the speculum having been removed during the latter part of the procedure. For the notes of this case we are indebted to Mr. C. E. Michael, dresser in the eye wards.

A man aged sixty-two years was admitted to Guy's Hospital under the care of Mr. Higgens, on Aug. 23rd, 1896. He had lost his left eye seven years before. The eye was soft, shrunken and painless. The right eye had always been myopic and had troubled him a good deal for two years, but more especially so during the last three months. The pupil was oval and reacted to light, the iris was tremulous; the lens was opaque and floating freely in the vitreous, but never came through the pupil into the anterior chamber. Vision was $\frac{1}{60}$, but was improved to $\frac{1}{4}$ by the aid of a concave lens of 2·50 D. The eye gave myopic refraction to the ophthalmoscope, there was a large posterior staphyloma, and extensive atrophic changes in the choroid in other parts; the lens when at rest lay on the most dependent part of the eyeball. Mr. Higgens advised the patient to have nothing done, but the man said he was gradually losing his sight and was willing to take the risk of an operation. Accordingly on Aug. 25th an attempt was made to transfix the lens with a cataract needle inserted behind the iris, and to fix it sufficiently to allow of its extraction, but the attempt failed. On the 31st another attempt was made to fix the lens, but with a similar result. The patient was then turned on his face, his head projecting over the end of the operating-table, in which position the lens rested on the back of the iris. Mr. Higgens sat on the floor, had the eye illuminated by an ordinary ophthalmoscopic mirror, made a small flap section upwards, and removed the lens with Taylor's loop vectis; no iridectomy was performed; a small quantity of vitreous was lost. The patient was then turned over on to his back and the eye was washed and bandaged in the usual way. He made an uninterrupted recovery. On Oct. 11th the eye was still myopic to the extent of 7 D. The patient produced the glasses he used to wear before anything went wrong with his eye; they were found to be 20 D; his vision was $\frac{1}{4}$ with − 5 D.

Medical Societies.

LIVERPOOL MEDICAL INSTITUTION.

Spontaneous Dislocation of the Lens into the Anterior Chamber.—Tumour (external) of the Eyeball.—Eyelash in the Anterior Chamber.—Recurrent Cystic Adenoma.—Cases of Lead Poisoning with Note on the Detection of Lead in Organic Fluids.—Demonstration of Skin Diseases.

A MEETING of this society was held on Dec. 17th, Dr. RICHARD CATON, President, being in the chair.

Mr. BICKERTON related a case of Spontaneous Dislocation of the Lens into the Anterior Chamber occurring in an elderly female. She denied all history of injury and declared herself a teetotaler. The right eye had been removed for injury twenty-five years ago. On admission to hospital after a lapse of seventeen days, tension was *plus*, sight *nil*, and the lens was undergoing cataractous change. The lens was easily removed by linear incision with but slight escape of vitreous. It was then seen that there was no iris above. Probably injury years ago had caused rupture at the corneo-scleral margin with prolapse of the iris, and through the resulting coloboma the lens had now slipped.

Mr. BICKERTON also reported a case of Extra-ocular Tumour in a girl aged eight years. The tumour was of three months' growth. It was a hemispherical projection half the diameter of the eye and covered with conjunctiva. It extended from within a quarter of an inch of the lower

[7] THE LANCET, Aug. 15th 1896, p. 456.

[1] Heath: A Dictionary of Surgery.

[2] Sajous: Annual of the Universal Medical Sciences, vol. iv., 1892, 1893.

margin of the cornea to the lower conjunctival fornix. It was hard to the touch and not tender, and firmly adherent to the eyeball and moved with it. The conjunctiva was freely moveable over it and contained several dilated veins. There was no history of malignant disease. It was easily removed through the conjunctival incision by dissection from the sclerotic. There was a difference of opinion after microscopical examination as to whether the tumour was a sarcoma or of tuberculous origin.

Mr. RICHARD WILLIAMS showed a drawing of a case of Tumour of the Iris due to the presence of a cilium in the anterior chamber. The patient, a stonemason aged twenty-two years, had received an injury to the left eye two years previously. As evidence of this there was a linear scar on the cornea opposite the tumour. The cilium lay across the upper part of the anterior chamber with its root apparently embedded in the tumour. The tumour was rounded and was supposed to be a cyst; when the anterior chamber was opened and the cilium removed the tumour was found to be devoid of cyst wall, and was probably composed of proliferated epithelium from the root sheath of the hair.

Mr. MITCHELL BANKS showed a woman from whose left breast he had removed a large Cystic Adenoma about 15 lb. in weight sixteen years ago. Three years after this operation he removed a small recurrence. At the present time there was again a tumour present about the size of a large orange which had grown during the last six months. All these tumours had attacked the left side of the chest, that from which the breast was removed at the original operation.

Dr. ABRAM read a short paper upon Two Cases of Lead Poisoning with a note on the Detection of Lead in Organic Fluids. Both of the cases were examples of lead encephalopathy—one, the epileptiform variety, recovered, and the other, the comatose variety, succumbed. He drew attention to a simple method of detecting lead in organic fluids by means of pure magnesium; he had been testing this method in conjunction with Mr. Prosper Marsden.

Dr. G. G. STOPFORD TAYLOR gave a demonstration of cases of Skin Diseases by means of the lantern slides. These illustrated cases, collected from his clinique, although devoid of colour, were exhibited as an effective method of displaying the appearances of certain skin affections and cases in various stages of treatment. Among others he showed a case of granuloma fungoides which had been treated for months with baths of long duration, some very extensive and apparently hopeless cases of lupus vulgaris treated advantageously with thyroid extract, a case of adenoma sebaceum, and examples of acute dermatitis of the eczema type, of malignant pemphigus, acute traumatic pemphigus, rhinophyma, molluscum fibrosum, and elephantiasis where the sufferer scaled 34½ st. in weight.

MIDLAND MEDICAL SOCIETY.

Middle Meningeal Hæmorrhage.—Exhibition of Specimens.—Gastro jejunostomy for Pyloric Obstruction.

AN ordinary meeting of this society was held on Dec. 16th at the Medical Institute, Mr. J. W. TAYLOR being in the chair.

Mr. W. F. HASLAM read the notes of a case of Middle Meningeal Hæmorrhage which he had successfully treated; the patient was a child aged three years and eight months. There was a history of a fall. No symptoms occurred for fifteen minutes, but then unconsciousness and violent left-sided convulsions supervened.

Mr. CHRISTOPHER MARTIN showed a Tumour which he had removed from the liver of a middle-aged woman. The tumour was about 4 lb. in weight. It was attached by a vascular pedicle to the anterior border of the liver. The gall-bladder was spread out over it. The pedicle was ligatured in sections. The cystic duct was ligatured and divided and the tumour, with the gall-bladder, cut away. The patient made an uninterrupted recovery. On section the tumour proved to be composed of altered liver cells with large vascular spaces. Mr. Martin believed it to be an accessory pedunculated lobe of the liver which had undergone degenerative changes.

Mr. J. FURNEAUX JORDAN showed a specimen of Calculous Pyonephrosis which had been removed three weeks previously from a woman by abdominal nephrectomy. Previously to being seen she had suffered chiefly from a sense of discomfort in the right side, amounting to pain only a week or two before the operation. There was a large quantity of pus in acid urine. The patient made a good recovery, passing between thirty-five and forty ounces of urine daily.

Mr. GEORGE HEATON showed an Oxalate of Lime Calculus weighing eighty grains which he had successfully removed from the right kidney of a young man. The calculus was found firmly fixed in the opening of the ureter into the pelvis of the kidney and had caused distension of the pelvis and pyuria. The kidney was situated very high up, being entirely hidden by the lower ribs, and this rendered the operation somewhat difficult. The patient had been under observation for a lengthened period, and though the urine was repeatedly examined under the microscope no trace of blood was ever discovered. The characteristic stabbing pain was well marked and during the last few months pus had appeared in increasing quantities.

Mr. HASLAM read a paper on Gastro-Jejunostomy as a remedy for Pyloric Obstruction. He reported two cases in which this operation had afforded relief from all urgent symptoms and had been followed by a great gain of flesh, in spite of the fact that both patients were very cachectic and wasted when the operation was performed. The junction was in each case effected by a Murphy's button. One of these was passed per anum after the long period of 140 days.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Rigid Os.

A MEETING of this section was held on Nov. 27th, Mr. HORNE being in the chair.

Dr. ALFRED SMITH exhibited a pair of Suppurating Ovarian Dermoid Cysts. He removed them from a woman aged thirty years. The leading symptoms from which she sought relief were a very heavy menstrual flow, lasting for ten days, dysmenorrhœa, and dyspareunia; the temperature was 100° F. at night and 99·6° in the morning. He put her under ether and was at once able to map out two tumours, apparently the right and left ovaries, about the size of goose eggs. He found extensive adhesions between the omentum and the tumours and between the tumours and the rectum. On his separating the one to the right it burst and the smell from it was very fœtid. The pelvis was washed out with a saline solution and a drainage tube put in. He was happy to say that it proved one of the most aseptic operations he had ever performed. At no time did the temperature rise to 100°.

Dr. F. W. KIDD exhibited a Uterus which he had removed by vaginal hysterectomy for cancer. The patient was thirty-five years of age. The only question was whether or not there was a fair prospect of removing all the diseased tissue. She was placed under an anæsthetic, and after the pelvis had been examined he concluded that all the diseased portions of the organ could be removed. About the junction of the bladder with the urethra was a small nodule, and there was some difference of opinion as to its nature. The anterior wall of the vagina was easily drawn down and the nodule, which proved to be a small cyst, was excised. The first intention was to ligature the uterine arteries and apply clamps higher up; yet when the tenaculum forceps were applied the tissue proved to be utterly rotten and broke away, consequently the procedure was reversed. The uterine arteries were clamped and the lower portion of the uterus separated with scissors. There was great difficulty in getting the fundus down, for its walls were extremely thick. It was finally inverted through the anterior incision in the vagina by means of vulsellum forceps and the upper portion of the broad ligaments was ligatured along with the vessels; both ovaries and tubes were also removed. The case made remarkably good progress, but four or five days after the operation her temperature varied between 100° and 102°, and it was found that there was a fœtid discharge which arose from a portion of iodoform gauze which had been overlooked in the dressing. He neglected to make a note of the number of strips of gauze he had put on round the handles of the clamps, and in consequence of this, when

they came to be removed, one was left in the vagina, and the result was extensive suppuration. A week after the operation, however, she was able to walk downstairs. He believed that all the diseased structure had been removed, and at the end of a fortnight she left the hospital perfectly well. The lesson to be learned from the accident in this case was that the number of dressings in an operation should always be counted and noted by the operator.—Dr. WILSON said an accident similar to that mentioned by Dr. Kidd happened to him in an operation for the removal of a uterus which he performed with the assistance of Dr. Smyly. A clamp and gauze were applied to the ovarian artery on the left side, and in order to prevent the clamp from irritating the peritoneum a second piece of gauze was put in. He removed the first gauze, but could not get the clamp away. Afterwards he succeeded in removing the clamp, but the second gauze remained; and after the tenth day the temperature began to rise, and on examination the second gauze was detected and removed. The woman was doing very well at present.

Dr. JELLETT exhibited for Dr. SMYLY two recent specimens. The first specimen consisted of a Tumour of the Left Ovary the size of a large orange and intimately connected with a large hydrosalpinx. The ovary and tube on the opposite side, which were enlarged owing to inflammation, were also shown. There was no difficulty in removing the large ovary and tube, but considerable trouble was experienced with the smaller one. The patient made an uninterrupted recovery. The second specimen consisted of Two Enlarged and Dilated Tubes. The removal was exceedingly difficult. In consequence of oozing a drain of iodoform gauze was inserted into the pelvis and the abdominal wound sewn up. The patient was dressed on the second day in order to remove the drain, but it was found that it had slipped back into the abdominal cavity. The abdomen was in consequence opened, the gauze found after some difficulty, and the wound again closed. The patient went on well, with the exception of a slight attack of bronchitis, which caused considerable coughing. The sutures were removed from the abdominal wound on the eighth day and the wound appeared healthy and perfectly united. The next day it was found that the wound had burst and that the intestines were lying on the abdominal wall. She was again anæsthetised, the intestines and peritoneal cavity well washed with boric lotion, and the wound revivified and resutured. She made an uninterrupted recovery and the wound is now well healed.

Dr. E. WINIFRED DICKSON read a paper on a Case of Rigid Os: Discission by Dührssen's Method, of which the following is an abstract. The term "rigid os" may fairly be applied to the following case, for the pains during the whole labour were strong and frequent, so as to drive the head through the brim of the pelvis till it almost rested on the perineum, and yet at the end of ninety-six hours the os only admitted three fingers and the edges were hard and unyielding. The details are as follows:—Early on Aug. 20th, 1896, a local practitioner sent to the Coombe Lying in Hospital for help, as he had a patient who had been in labour for fifty-six hours and she was making no progress. I found a healthy primipara, aged twenty-four years, having strong pains and straining violently. The temperature was 98·4° F., and the pulse 90; the child was in the first vertex position; the head was fixed and the fœtal heart was good. There was plenty of liquor amnii, though the membranes were said to have ruptured. The lower zone of the uterus was thinned out and tightly stretched over the head; the cervical canal was still unopened, barely admitting one finger. Morphia was administered hypodermically—at first a quarter of a grain, later on half a grain, and twelve hours later the cervical canal was obliterated and the external os admitted two fingers. The head was still lower in the pelvis and the liquor amnii had drained away. Chloral was then given—fifteen grains every fifteen minutes till sixty grains had been given—and later a hot bath, hot douches, and an enema. Twelve hours afterwards there was very little progress and I advised operation on account of the risk of rupture of the thinned out lower zone of the uterus. With a view to this she was removed to the Coombe Lying-in Hospital, when Dr. Kidd examined her. He advised trial of manual dilatation, and this was accordingly carried out. Another hot bath was also given and repeated hot douches. Five hours later there was no progress; the os only admitted three fingers, and the head and encircling cervix almost rested on the perineum. The patient was then at the end of the fourth day in labour, her temperature rose to 99·2°, and the fœtal heart became very rapid. Operation was decided on. The patient was anæsthetised with chloroform, placed in the dorsal position, and disinfected. A duckbill speculum was inserted, and under the guidance partly of the eye and partly of the finger four incisions were made with blunt-pointed scissors in crucial fashion, each about from 1½ to 2 inches long, dividing the cervix up to the vaginal junction. The tissues cut with a harsh grating sound. There was no bleeding. Forceps were then applied, and a female child easily delivered, but in a condition of white asphyxia. It was soon resuscitated and weighed six and three-quarter pounds. Even after delivery there was scarcely any bleeding from the cut cervix. The uterus contracted well. After delivery of the placenta the incisions in the cervix were united with silver wire, nine sutures in all being inserted. The right lateral cut had torn slightly; the others had not torn at all beyond the original incisions. The perineum required one stitch. The uterus and vagina were then douched with creolin solution and an antiseptic pad applied to the vulva. Frequent vaginal douches were used during the puerperium, and the patient made a perfectly aseptic recovery. The perineal stitch was removed on the fifth day and the cervical stitches on the tenth day, and the union was perfect in all.—Dr. KIDD said all the ordinary routine treatment short of surgical interference had been, in the first instance, exhausted, and then he was glad to allow Dr. Dickson to carry out the operation in question. From its results he should have great confidence in resorting to the same procedure in similar cases in future.—Dr. JELLETT, Dr. KNOTT, Dr. DOYLE, and the Chairman discussed the case, and Dr. DICKSON replied.

Dr. KIDD read a paper detailing three cases of Ectopic Gestation and submitted specimens. As there were two other papers on the same subject the discussion was deferred until after the reading, at the next meeting of the section, of these two papers. The abstract of Dr. Kidd's paper will appear in the report of the next meeting of the section.

Reviews and Notices of Books.

A Text-book of Special Pathological Anatomy. By ERNST ZIEGLER, Professor of Pathology in the University of Freiburg. Translated and Edited from the Eighth German Edition by DONALD MACALISTER, M.A., M.D. Camb., and HENRY W. CATTELL, M.A., M.D. Sections I.–VIII. New York: The Macmillan Company. London: Macmillan and Co., Limited. 1896. Price 17*s.* net.

OF all text-books on pathological anatomy few have attained so well-deserved a popularity as the work of Professor Ziegler. Originally undertaken to fill the place occupied by the now forgotten volume of the late Professor Forster, this text-book at once attracted attention from the lucidity of its teaching, the accuracy of its exposition, and not least for the originality and delicacy of its illustrations. Fresh editions were constantly being called for, of which the latest (the eighth) appeared about twelve months ago. The work has grown in dimensions with each succeeding edition, for its author has spared no pains to keep it abreast with the ever-widening knowledge of the subject with which it deals. Yet it has lost none of its special characters and still maintains a foremost position amongst pathological text-books. About ten years ago the English-reading student was gratified by having the opportunity of making use of this treatise, thanks to the faithful translation produced by Dr. Donald MacAlister, and the same cordial reception will doubtless be awarded to the translation of the eighth edition, of which the volume before us is the first instalment. Dr. MacAlister has been associated in this task by Dr. H. W. Cattell, who holds the office of Demonstrator of Morbid Anatomy in the University of Pennsylvania, and it is evident from the

admirable manner in which the translation has been prepared that the work has been carried out *con amore*.

The German edition appears in two bulky volumes—the one dealing with General Pathological Anatomy and the other with Special Pathological Anatomy. This volume of the English edition contains the first eight sections of the second part of the treatise and constitutes a handsome book of nearly 600 pages. The subjects of these sections are as follow:—(1) Blood and lymph; (2) the vascular mechanism; (3) the spleen and the lymph-glands; (4) the osseous system; (5) the muscles and tendons; (6) the central nervous system; (7) the peripheral nervous system; and (8) the skin. Each of these sections is treated in a systematic fashion, the retention of the characteristic German method of "leading" the type of salient terms being introduced with much advantage. Another not unimportant feature is the ample bibliography appended to each branch of the various subjects—a plan that renders the work of special service to the advanced pathologist. Of the several sections, those dealing with the osseous system and the nervous system are the most detailed. The former opens with a description of the bone marrow and its significance in disease. Then follows a chapter on Atrophic Affections of Bone, containing an excellent account of "halisteresis," of which osteomalacia is the most marked example. It is pointed out that the causes of this decalcification are unknown, some supposing that the presence of lactic acid in the bone-marrow causes solution of the lime-salts, others that it is due to an increased amount of carbonic acid in the blood. We do not observe any reference to the influence of the ovaries on nutrition which has been considered to justify the removal of these organs in dealing with this progressive disorder of bone. The subject of Regeneration and Hypertrophy includes a succinct account of the formation of callus and of exostoses. Amongst the chronic inflammations it may be noted that acromegaly is included together with "pulmonary hypertrophic osteo-arthropathy" under the term "ostitis hypertrophicans," which is contrasted with "ostitis deformans." The chapter on the Infective Granulomata of Bone mainly deals with tuberculous and syphilitic affections, the histology of the changes being but scantily described, although subsequently under "tuberculous arthritis" there is slightly more detail on this head. The chapter on Disorders of Osseous Development and Growth deals with many conditions, but naturally most attention is devoted to rickets, which is amply described. After treating of Tumours and Cysts of Bone certain chapters are devoted to the Pathology of the Joints, in particular the changes in chronic ulcerative arthritis and in arthritis deformans are well and clearly set forth. In the section on the Central Nervous System the description of Lesions of the Spinal Cord precede those of the Brain, a brief survey of the normal anatomy of these organs introducing the discussion of the morbid changes. The section on the Peripheral Nerves is mainly occupied with the subject of neuritis, brief chapters on Regeneration and Tumours (including fibroma molluscum) being appended. The morbid anatomy of the Skin is treated in the same clear and systematised manner as the rest of the work, the merit of which is that in no part are the descriptions unduly or disproportionately expanded. Indeed, if anything, the text errs on the side of conciseness, but with the ample references to literature this is a fault which can be readily remedied by the advanced student. Sufficient is given for a fair insight into the facts of morbid anatomy. Of the illustrations, which are profusely distributed throughout the book, we cannot speak too highly. They are of themselves of high educational value and are such as to satisfy the most æsthetically-minded critic. We may affirm without fear of contradiction that the students of to-day are fortunate in having access to a work of this class, which cannot fail to render their pathological pursuits pleasant as well as instructive. It is what it professes to be—a text-book, and that of the best type.

LIBRARY TABLE.

Lectures on Medicine to Nurses. By HERBERT CUFF, M.D. Lond., F.R.C.S. Eng. London: J. and A. Churchill. 1896. Price 3*s.* 6*d.*—Although opinions may differ as to the desirability of including in the training of a nurse the subjects of the strictly medical curriculum, and the fear (in some cases perhaps well-founded) that the "modern nurse" may, with this smattering of knowledge, be tempted to usurp the office of the medical man, there is yet something to be said for giving her an intelligent insight into the domain in which she has to dwell. The nurse is none the worse for knowing the why and wherefore of the duties she has to perform, and it is impossible to give her such reasons without imparting to her some knowledge of the structure and functions of the human body, and, as in the clear and sensible lectures before us, some idea, too, of the derangements from health which may afflict it. The author has had experience as medical officer in two large hospitals, and is therefore in a position to know those points on which instruction is most needed by the nurse. He has succeeded in conveying in simple, untechnical fashion a considerable amount of information within the scope of sixteen lectures. Whether the nurse, without actual bedside instruction, would be able to appreciate the varieties of pulse which are spoken of in one of these lectures may indeed be questioned, and we are not sure that she ought to attempt their discrimination but there can be no question as to the value accruing to her from such instructions as those on the forced feeding of infants, the management of the throat affection in scarlet fever, of the diet in enteric fever, of the nursing in tracheotomy and internal hæmorrhage, of massage, and many another practical matter which is clearly explained in these lectures. On the whole we think that Dr. Cuff has performed his duty as lecturer with much tact and that his little book may be taken as an example by others who have a similar duty imposed on them

The Girl's Own Paper for January contains plenty of seasonable and useful articles, and is embellished with a coloured frontispiece, "A Shepherd with a Pipe," after Giorgione. *The Sunday at Home* for next month is quite up to its usual standard of excellence and contains a very faithful reproduction of Mr. F. Walker's "The Harbour of Refuge," and a plate in tint of Mr. E. Blair Leighton's "Devotion."

THE SOUTHAMPTON HOSPITAL SUNDAY FUND.—At the annual meeting of the general committee of this Fund on Friday it was stated that the amount of this year's collection was £1175 4*s.* 3*d.*, and the expenses were £56 11*s.* 1*d.* Of the remainder, £803 odd goes to the Royal South Hants Infirmary, £83 to the Dispensary, £56 to the Jubilee Nurses' Institute, £61 to St. Mary's Cottage Hospital, £83 to the Free Eye and Ear Hospital, £18 to the Shirley Cottage Hospital, and £12 to the Southampton Maternity Society. The fund was the greatest since 1891. It was stated by the Mayor that it was his desire, if possible, to next year raise the £10,000 required to complete the building of the Royal South Hants Infirmary.

FREEMASONRY. — THE CAVENDISH LODGE. — An ordinary meeting of the Cavendish Lodge (No. 2620) was held at the Freemasons' Hall on Dec 18th, 1896, Brother Frederick Lawrance, P.A.G.D.C., Worshipful Master, being in the chair. After the transaction of the preliminary business Brothers Rickard W. Lloyd and George Alfred Buckmaster were admitted to the second degree, and Dr. Victor Albert Louis Edward Corbould and Dr. Frederick John McCann were initiated into Freemasonry. The members and visitors afterwards banqueted together.

THE LANCET.

LONDON: SATURDAY, DECEMBER 26, 1896.

THE ANNUS MEDICUS 1896.

Medicine.

ON reviewing the work which has been accomplished in medicine during the current year it is difficult to select any particular contributions or researches which stand pre-eminently forth as having made 1896 a memorable year in medical science; but much good work has been done, more especially on the border lines of medicine and bacteriology, if, indeed, the two should be separated even in literature. Two Royal Commissions have issued reports the importance of which cannot be over-estimated. The Royal Commission on Tuberculosis published their conclusions in 1895, but the evidence on which those conclusions are based was only issued this year. In addition to the evidence given verbally by experts numerous and extended experiments were made for the Commission by Dr. SIDNEY MARTIN and Dr. SIMS WOODHEAD. In regard to the question of meat obtained from tuberculous animals Dr. MARTIN is of opinion that the carcases should be rejected if there is any indication of generalisation of the disease, but cases of tuberculosis limited to one cavity ought to be passed—e.g., those in which the pleura, lungs, or thoracic glands alone, or those in which the intestines, mesenteric glands, liver, and udder alone are affected. It is also shown that the milk of tuberculous cows should be divided into two classes: (1) that given by cows the subject of tuberculosis of the internal organs without tuberculous disease of the udder; and (2) that given by cows the subject of tuberculosis of the internal organs and of the udder. The first condition is not associated with infectivity of the milk, but the second is; therefore such cows should be slaughtered. The report of the Royal Commission on Vaccination was issued on Sept. 19th. The delay in the issue of the report is certainly to be regretted, but the mass of evidence to be taken and considered and the differences of opinion on the part of the Commissioners explain in a great measure the time which passed between the commencement of the sittings and the appearance of the report. At first sight the report was disappointing, but on closer examination one point is most satisfactory, and that is the absolute unanimity of the Commissioners in the great question as to the protective influence of vaccination against small-pox. We have already commented in our columns on this report, and, therefore, will not again enter into the controversies which arise therefrom further than to state that all logical and enlightened minds cannot fail to grasp the fact that although the Commissioners differ as to the advisability of compulsory vaccination, yet their seven years' labour has resulted in the triumphal vindication of JENNER'S discovery, the centenary of which was celebrated this year.

The third International Congress of Dermatology met in London. Mr. JONATHAN HUTCHINSON contributed a valuable paper on the Duration of the Period of the Contagion of Syphilis. A discussion on Ringworm and the Tricophytons was opened by Dr. SABOURAUD. Some difference of opinion was expressed as to the separate existence of some of the various numerous species, but there seemed to be a general agreement that many of the large-spored varieties are of animal origin. A discussion on the Connexion of Tuberculosis with Diseases of the Skin other than Lupus Vulgaris was introduced by Dr. NEVINS HYDE.

Several communications have been published on Malaria. Dr. PATRICK MANSON in the Gulstonian Lectures gave an exhaustive account of the Malarial Parasite and the various forms which are met with in the blood of patients suffering from the disease. That this parasite, like all parasites, comes from without is certain, but hitherto efforts made to discover the extra-corporeal malarial germ by searching in external nature have proved very fallacious, many false hopes have been raised, but raised only to be very speedily dashed to pieces, and therefore the plan has been adopted of assuming that the parasite as found in the blood of man is present there as a normal circumstance in its life history, and of following it out of the human body and tracing it into and through outer nature back to man again. Dr. MANSON, from his researches, concludes that the crescent body and the tertian and quartan spherical bodies which proceed to flagellation are the extra-corporeal sporulating homologues of the intra-corporeal sporulating bodies; that the flagellum is the extra-corporeal homologue of the intra-corporeal spore. Both types of sporulating plasmodium have corresponding functions; both arise from the same source. One is the germ of the plasmodium inside the human body; the other is the germ of the plasmodium outside the human body.

Dr. MARSHALL of Huelva and Dr. THIN entered into an investigation to prove the following proposition: "As malarial fevers assume a variety of types in different parts of the world, and as at least three—some authorities would say five—varieties of parasites have been found associated with as many distinct types of fever, it appears probable that as many varieties of parasites exist as there are varieties of fever, and there is thus opened out to us a large field for observation in undertaking the study of the parasites found in the blood of malarial patients." Although this contribution to our knowledge on the subject was a most valuable and instructive one, yet the authors failed to entirely substantiate the above proposition, as it was not proved that the minute differences which they described might not have been merely accidental and possibly due to changes in the density of the medium and the effects of re-agents. The cases put forward were not entirely satisfactory, as instead of selecting simple tertian and quartan cases untreated by quinine Dr. MARSHALL narrated those of supposed double tertian and double quartan and other irregular forms of ague, so that further observations will be necessary to establish the relationship between the amœbic, the sporulating, and the crescentic varieties of the plasmodium.

The serum therapeutics of disease continue to attract

much attention and investigation. The treatment of diphtheria by the antitoxin of that disease has fully borne out the hopes first raised on its introduction. An important point seems to be gradually manifesting itself—namely, that those cases show the best results which yield a pure growth of the Klebs-Löffler bacillus on cultivation, whilst those in which streptococci are also found do not yield such favourable results. We shall look forward with much interest to the report of the committee appointed by the Clinical Society to investigate the matter. The report issued by the hospitals of the Metropolitan Asylums Board corroborates fully the advantages to be obtained by this treatment. In a communication from the British Institute of Preventive Medicine Dr. HEWLETT and Dr. NOLAN draw conclusions from 1000 consecutive cases of suspected diphtheria, and emphasise the desirability of a bacteriological examination in every case in which the throat symptoms are at all doubtful, and also call attention to the fact that virulent bacilli may be met with in the throat for weeks after convalescence. An anti-streptococcic serum has been introduced and has been used with success in some cases of septicæmia. Observations on the serum reaction in typhoid fever have been made by several observers, but the difficulties of the test prevent any extensive use of it. Dr. WYATT JOHNSTON and Dr. D. MCTAGGART of Montreal have recently published an account of observations they have made by the dried-blood method in typhoid fever and cholera, and their results were satisfactory.

The serum treatment of tuberculosis and syphilis has not become firmly established. Snake-bite has been occupying some attention. M. CALMETTE proposed a serum which has been successfully used on men and animals poisoned with snake venom, and Professor FRASER delivered a lecture at the Royal Institution of Great Britain on the treatment of snake-bite with antivenin. Blood serum was obtained from a horse which had received a dose of cobra venom estimated to represent twenty times the minimum lethal dose. This blood serum when tried yielded about 10 per cent. of a solid residue, which retains unchanged its antidotal properties for an indefinite period of time, and experience was cited to show that with this substance human life may be saved in a considerable, if not in a large, proportion of the cases of snake-bite which would otherwise terminate fatally.

The Nauheim treatment of diseases of the heart, by which is understood the treatment by the Nauheim baths and Dr. SCHOTT'S exercises, has been much discussed. Many papers on the subject have been published, amongst which may be mentioned those by Dr. BOWLES, Dr. LEITH, and Dr. KINGSCOTE. At the annual meeting of the British Medical Association a discussion on the Mechanical Treatment of Heart Disease was introduced by Sir T. GRAINGER STEWART. The general opinion would seem to be that in the Nauheim treatment we have a valuable addition to cardiac therapeutics, but that a tendency exists to over-estimate its advantages which cannot but prove harmful to a means of treatment of great use in certain cases.

But little new has been brought forward with regard to diseases of the nervous system. Dr. GOWERS chose as the subject of the Bradshaw Lecture Subjective Sensations of Sound, dwelling more particularly on tinnitus and vertigo. Sir DYCE DUCKWORTH, in delivering the Lumleian Lectures, discussed fully the subject of the Sequels of Diseases, laying stress on the results which may follow enteric fever and syphilis.

The most important medical publication of the year is undoubtedly the first volume of Dr. CLIFFORD ALLBUTT'S System of Medicine. This series of volumes is destined to take its place as one of the most important of books of medical reference. In this volume several important articles by various writers appear, which have already been referred to in our columns; but we would here again draw special attention to the article on the General Pathology of Infection by Dr. KANTHACK, those on Diphtheria by the same author and Dr. THORNE THORNE, Dr. GEE, and Dr. HERRINGHAM, and that on Tetanus and Cholera Asiatica by various writers, and, finally, to the article on Climate in the Treatment of Disease, by Dr. HERMANN WEBER and Dr. MICHAEL FOSTER. An American publication, "The Twentieth Century of Medicine," by various authors of various nationalities, is also an excellent and important work.

The marvellous discovery by ROENTGEN of rays capable of permeating certain substances entirely opaque to ordinary light rays seems likely to prove of more importance in surgery than in medicine, although investigations are being made by several observers as to their value in delineating the boundaries of the internal organs, more especially the heart.

Surgery.

Apart from the improvement in diagnosis due to the discovery of the ROENTGEN rays, which are dealt with elsewhere, but few advances of any great moment have been made in surgery during the year now near its close. The surgery of the abdomen is steadily becoming more extensive and more simple. Perhaps the most striking instance of a new operation is the operation for dilatation of the stomach performed by Mr. W. H. BENNETT. The medicinal treatment of non-obstructive dilatation of the stomach, when well marked, can hardly be described as satisfactory; many patients are unable to carry out the daily washing out of the stomach. A man aged thirty-four years was under Dr. W. EWART'S care in St. George's Hospital; he had developed great dilatation of the stomach after an attack of acute rheumatism following typhoid fever; washing out of the stomach caused little relief and marked constipation was present. Mr. BENNETT made a median vertical incision through the abdominal wall and drew out the stomach; then a fold of the anterior wall of the viscus was turned in by an assistant, the inverted portion being twelve inches in length and six inches in breadth, and the edges of it were stitched together, the stitches involving only the peritoneal and muscular coats. Thus the capacity of the stomach was greatly diminished. Though much collapse followed the operation the patient soon improved, and he was able to take food with comfort, experiencing no feeling of sickness or pain; the bowels acted freely. Three weeks after the operation the tympanitic area was found to be considerably reduced and the only discomfort complained of was an occasional slight dragging pain near the scar in the abdominal wall, but this was relieved by a belt. Mr. BENNETT is inclined to advise this operation for extreme

cases of dilatation of the stomach in which treatment by the stomach "toilet" is impracticable, intolerable, or ineffective.

The method to be employed in uniting the portions of intestine after re-section and in gastro-enterostomy is still a matter on which surgeons are by no means agreed. Dr. MURPHY'S button is employed to a very great extent, but some cases have been reported by Mr. C. J. BOND of Leicester where the button has been retained for lengthened periods (in one case for more than a year) after being used in gastro-jejunostomy; no harmful results appear to have followed this retention. Mr. J. JACKSON CLARKE has devised an ingenious "bobbin," in which rubber rings are employed to hold the bowel on to the core of the bobbin; he considers that the edges of the rings are less liable to give rise to sloughing than the metal edges of a Murphy's button. LORETA'S operation of mechanical dilatation of a simple stricture of the pylorus has quietly dropped out of use; it was dangerous, as it sometimes rapidly led to a fatal issue, and in the cases which survived the operation the relief was transient. Pyloroplasty, which was suggested almost simultaneously by HEINEKE and MIKULICZ, has replaced it, and bids fair to prove the best treatment for fibrous stenosis of the pylorus. Mr. RUTHERFORD MORISON of Newcastle has described in THE LANCET four cases in which he performed this operation with results which bear witness to its great value.

The extent to which the peritoneum had to be raised in the old extra-peritoneal method of ligature of the iliac arteries was always a great source of danger, especially when the operation was done for aneurysm, as the dilated vessel was often adherent to the peritoneum. Of late years the trans-peritoneal method has been resorted to with very satisfactory results, and we were able to record the particulars of a very interesting case in which Brigade-Surgeon-Lieutenant-Colonel W. F. STEVENSON ligatured the common iliac artery for a diffuse aneurysm of the external iliac and common femoral arteries. The patient recovered perfectly. We believe this is only the second instance of the successful performance of this operation.

Catheterism in many cases of difficulty of micturition due to enlargement of the prostate gives fairly satisfactory results, but there are also many other cases in which cystitis with all its attendant evils rapidly supervenes. For these latter cases several plans of treatment have been adopted, and they may be divided into operations for removal of a portion of the enlarged gland and operations leading to its atrophy. Prostatectomy is sometimes performed through a perineal wound, but the suprapubic operation (MCGILL'S) is decidedly more convenient, as is well shown in a case recorded by Mr. H. LITTLEWOOD of Leeds. Recently the procedures intended to cause atrophy of the enlarged gland have been extensively practised. Castration, which was first performed for this purpose by RAMM of Christiania, and then by WHITE of Philadelphia, gives very good results in many cases, perfect control over the bladder being regained; but in a by no means small proportion of cases a fatal result has ensued, probably due to renal complications. Mr. C. W. MANSELL MOULLIN, who has strongly advocated this operation, has more recently suggested that unilateral orchectomy might suffice in some cases, and in a paper in THE LANCET he has quoted cases which support this view, but, as he has also shown, destruction of one testis will not necessarily prevent enlargement of the middle lobe of the prostate, for lateral enlargement alone is the operation indicated. The other method of inducing prostatic atrophy is that first advocated by Mr. REGINALD HARRISON; it consists in division or ligature of one or both vasa deferentia. The shock is much less and the mortality should compare favourably with that of unilateral or bilateral castration.

Mr. R. HARRISON has also suggested an extension of the surgery of the kidney to cases where albuminuria is the result of congestion; in these he considers—and supports his opinion with cases—that punctures or incisions in some cases at least will relieve pain and give rise to an increased secretion of urine. The suggestion is of interest, but at present nothing definite can be said of its ultimate value.

Mr. A. H. TUBBY has drawn attention to a condition first described by MORTON of Philadelphia in which pain is felt at the heads of the metatarsal bones, especially the fourth; it is known as Metatarsal Neuralgia. The affection is not uncommon if looked for, and appears to be due to pressure on a digital nerve by the head of the metatarsal bone.

Obstetrics and Gynæcology.

At the Obstetrical Society of London the year has been one of marked activity, many papers of considerable importance have been read, and a great number of specimens of various degrees of interest has been exhibited. Professor G. EMILIO CURATULO of the Royal University of Rome contributed a paper on the Influence of the Removal of the Ovaries on Metabolism in connexion with osteomalacia. The possibility that the ovaries produced a secretion capable of facilitating the oxidation of phosphorus in the bones was considered; the removal of the ovaries by withdrawing this secretion would tend to diminish the oxidation of phosphorus, and so favour an accumulation of earthy salts in the bones. Dr. REMFRY read a paper on the Effects of Lactation on Menstruation and Impregnation. Among his conclusions may be mentioned that, of suckling women—57 per cent. have absolute amenorrhœa, while 43 per cent. menstruate more or less, and that 20 per cent. menstruate quite regularly. If absolute amenorrhœa exists during lactation the chance of pregnancy occurring is very small, while among those who menstruate regularly during lactation the chance of pregnancy is about ten times greater. Mr. HARRISON CRIPPS read a paper on Abdominal Hysterectomy for Fibroid Tumours, with Intra-peritoneal Treatment of the Stump, with notes of eight cases, seven of which recovered and one died from sepsis. The discussion on this paper showed that while several of those present were working at the intra-peritoneal method, the extra-peritoneal method of treating the stump still had its advocates. Dr. HERBERT SPENCER read a paper on a case of Deciduoma Malignum, and communications on the same subject were made by Mr. RUTHERFORD MORISON and Dr. EDEN. Mr. DORAN read a paper on cases of Fibroma of the Ovary and Ovarian Ligament removed by operation with a series of after-histories of cases previously reported. Dr. JOHN PHILLIPS read a paper on Anterior Colpotomy, an operation for which he considered

we were indebted to DÜHRSSEN, and which consists in opening the peritoneal cavity through the anterior vaginal fornix. Mr. THOMAS H. MORSE of Norwich related a case of Impacted Ovarian Dermoid Cyst removed by abdominal section during the ninth month of pregnancy; labour came on normally twenty-five days after the operation. Dr. MCCANN read a paper on the Etiology of Gonorrhœa. Dr. G. F. BLACKER and Mr. LAWRENCE read a paper on a case of True Unilateral Hermaphroditism with ovo-testis occurring in man, with a summary and criticism of the recorded cases of True Hermaphroditism. Dr. LEWERS read a paper on a case of Double Uterus with Double Hæmatometra and Complete Absence of the Vagina in a girl seventeen years of age. No exactly similar case appears to be on record. Dr. THOMAS G. STEVENS read notes of a case of Completely Cleft Spine associated with an Unusual Visceral Malformation in an Anencephalic Fœtus. Dr. EDEN read a paper, illustrated by a large number of micro-photographs, on the Structure of the Ripe Placenta and the Changes which occur in Placentæ retained *in utero* after the death of the Fœtus; and at the last meeting of the year a paper was read by Dr. SPENCER on three cases of Cæsarean Hysterectomy (PORRO'S operation). To the British Gynæcological Society, also, many interesting communications were read. Mention may be made of papers, among others, read by the President, Dr. CLEMENT GODSON, and Mr. F. BOWREMANN JESSETT upon Malignant Disease of the Body of the Uterus, and by Mr. WILLIAM ARMSTRONG upon the Latent Gout of the Menopause.

Among the many subjects of gynæcological interest on which papers have appeared during the past year may be mentioned that of fixation of the uterus. Operations with this object are undertaken for the various degrees of retroversion and retroflexion of the uterus, and for uterine prolapse. The operations referred to are, broadly speaking, of two kinds. In the one class there are the different forms of ventral fixation in which, after abdominal section, the uterus is attached more or less intimately to the anterior abdominal wall. In the other class an opening is made into the utero-vesical pouch of the peritoneum through the anterior vaginal fornix and the body of the retroflexed or retroverted uterus is drawn up to the opening and fastened there in a position of anteversion. This is the so-called vaginal fixation of the uterus. An interesting paper recording a series of cases of this operation by Dr. GOW appeared in THE LANCET of July 4th this year. Apart from the immediate result of these operations, an important point when they are performed during the child-bearing period is as to what the consequences are likely to be should pregnancy occur. According to Dr. NOBLE of Philadelphia, who has published a valuable paper on the subject, the results of vaginal fixation, regarded from the obstetrical point of view, have been such as to be fairly described as disastrous. Vaginal fixation of the uterus has, according to the same authority, been the cause of abortion in one-fourth of those cases in which pregnancy has occurred after the operation, and in a considerable proportion of other cases in which abortion did not occur more or less serious obstetrical complications, such as delivery by forceps, version, and even by craniotomy or Cæsarean section, have been recorded. He regards vaginal fixation of the uterus, therefore, as an unjustifiable operation in women during the child-bearing period of life. Abdominal fixation of the uterus appears to be much less serious in relation to subsequent pregnancy, though even this operation has been known to cause serious difficulty. Two cases are related by Dr. NOBLE from his own experience. In one delivery was effected by forceps with great difficulty, and with the loss of the child; in the other delivery by the vagina was found impracticable, and PORRO'S operation had to be performed. The case unfortunately terminated fatally. He concludes that such accidents may be avoided by altering the technique of the operation to some extent. Thus he considers the object should be to produce slight rather than firm adhesions between the uterus and the abdominal wall. Another and even more important point is to pass the uterine sutures through the anterior instead of through the posterior wall of the uterus. In this way, if pregnancy occur, the uterus is more favourably placed for undergoing its normal development. Shortening the round ligaments is an alternative procedure which appears to have no serious effects in the event of pregnancy taking place. Its disadvantages are that there is some tendency after it to hernia, that the ligaments may in some cases be difficult to find, and that a necessary condition for performing it is the absence of any adhesions. This appears to us, perhaps, its most serious defect, since in so many cases where retroversion or retroflexion cannot be corrected by means of replacement with the sound and the use of pessaries—that is, in the very class of cases where operative treatment is most likely to come up for consideration—the impossibility of treating the displacement by such simple means is due to the presence of adhesions. In cases, then, when something in the way of an operation appears to be called for it appears to us that vaginal fixation and shortening the round ligaments are inferior to ventral fixation according to the technique recommended by Dr. NOBLE.

The surgical treatment of uterine fibroids has again engaged the attention of many gynæcologists during the year. The time does not seem yet to be at hand when operators will agree as to what is the best method for removing a uterus enlarged by fibroid tumours—say, for example, to a size corresponding to that of the pregnant uterus at six months or later. There are still those who advocate the extra-peritoneal treatment of the pedicle fortified by a long experience of it. These may be considered as belonging rather to the conservative school, while, on the other hand, those of perhaps a more progressive spirit are impressed with the advantages attaching to some method that allows the operator to drop the pedicle back into the peritoneal cavity, and close the wound. The comparison, it seems to us, is scarcely as yet quite a fair one. The extra-peritoneal method, as it is practised by its most successful advocates, may be regarded as an operation that has been brought probably to the highest possible pitch of perfection of which it is capable. Its position now in the hands of those who chiefly practise it represents the operation at about its best. On the other hand, the intra-peritoneal treatment of the uterine stump is comparatively quite a recent thing. BAER'S operation may be taken as the type of this class of operation, and it has only been practised some five years or less—in this country, at all events. In BAER'S hands it seems to give very satisfactory results, but it appear

to be a somewhat uncertain operation. It will be remembered that it consists in tying off the broad ligaments and uterine arteries, in dissecting down anterior and posterior flaps of peritoneum, in removing the mass at about the level of the internal os, and in then stitching (though this was not insisted on as essential by its author) the peritoneal flaps over the stump. Some oozing may take place from the latter, and unless it happens to be able to drain freely through the cervix into the vagina the exudation may obviously easily become a source of danger. It seems to us very probable, though it is proverbially dangerous to prophesy, that the operation of the future for these cases will be the so-called "pan-hysterectomy," the whole fibroid uterus, including the cervix, being removed entirely from above. The stump, with all its dangers and uncertainties, which has always been a stumbling-block, is then got rid of. Many operations of this kind have been successfully performed during the year. Dr. CHRISTOPHER MARTIN read a paper on a series of eight cases of pan-hysterectomy before the Edinburgh Obstetrical Society. All his cases recovered. If subsequent experience confirms his views of this operation—as seems likely—it will probably tend to displace its older rivals.

We cannot close this brief retrospect without alluding to the considerable prominence that has been the lot of various obstetrical and gynæcological questions in the law-courts during the year. We discussed these cases fully at the time, and we do not propose to go over the ground again. The points in dispute have been partly ethical, and partly scientific. One case terminated most unfavourably to the physician concerned, while in the other and more recent one, Dr. CULLINGWORTH, the defendant, had the satisfaction of getting a verdict in his favour—a satisfaction that has been, we think, echoed by the profession generally. It is a matter for congratulation also that the profession has been so ready to give substantial effect to its sympathy on this occasion.

Therapeutic Progress.

The therapeutic progress of the year continues to be influenced by the patient researches connected with the introduction of the various forms of serum, and the interest taken in these subjects to a large extent overshadows the work in other departments of therapeutics. Concerning the use of antitoxic serum for diphtheria several valuable papers and reports have been published. The medical superintendents of the Metropolitan Asylums Board consider that in antitoxic serum we possess a remedy of distinctly greater value than any other with which we are acquainted. This report is cautious in its endeavour to speak with impartiality, but it sufficiently indicates that the mortality of cases of average severity has been distinctly reduced. Much has been written during the year upon the use of antivenin for snake bites; Professor FRASER has continued his researches, and his further experience confirms the favourable opinions he originally expressed. Tetanus antitoxin does not appear to have given as much general satisfaction, although in isolated instances it would seem to have contributed to the recovery of the patients. Many other forms of serum have been devised for other diseases, but have hitherto failed to establish firm conviction of their efficacy.

Amongst papers connected with the influence of drugs upon the circulatory system, one of the most interesting was that in which Dr. LEECH summarised the evidence which has recently been adduced connected with the absorption of iron salts when taken internally. It will be remembered that the whole question of the absorption of iron has recently been somewhat chaotic; some authorities have denied that iron preparations administered by the mouth are absorbed from the intestinal canal, and some of the benefits of iron preparations have been attributed to a stimulating influence on mucous membrane, or else to the absorption of organic forms of iron while inorganic salts are being converted into insoluble sulphides. Dr. LEECH maintains that the balance of evidence obtained from experiments indicates that iron is undoubtedly absorbed by the small intestine, or at least by the duodenum, and that it is stored up in the liver and the spleen and slowly utilised in the formation of hæmoglobin. The experiments referred to are connected chiefly with the inorganic salts of iron, but during the year much has been written upon ferratin, an iron albuminate, as a hæmatinic. This has been stated to be useless in pernicious anæmia, whilst it is of the greatest value in secondary anæmia and in chlorosis, especially when the latter depends upon gastric ulcer. It must be admitted, however, that some authorities have denied that ferratin is absorbed.

Numerous preparations have been introduced to exert a sedative, astringent, or antiseptic effect upon the alimentary canal, especially upon the lower portion of the intestine. Some of these depend for their action upon their power of splitting up into two active constituents under the influence of the intestinal secretions, while they pass unchanged through the stomach. On the other hand, the efficacy of charcoal has been submitted to careful analysis to determine whether when in the wet state it possesses any power as a deodoriser and oxidiser of organic substances. The experiments of Dr. WILD appear to indicate that charcoal, whether dry or mixed with water, is a powerful oxidising agent, and in all probability it may regain the favour from which it has been displaced by the statements of its loss of power when moistened. Dr. WILD considers that charcoal will probably be of use in cases where there is undue decomposition of the contents of the alimentary canal, as in dilatation of the stomach or when the alimentary canal contains abnormal toxic substances. Tannaform, a condensation product of tannin and formic aldehyde, has been recommended as being unirritating to the buccal mucous membrane, of passing through the stomach unchanged, and of then acting as an astringent and an intestinal antiseptic. Tannalbin is similarly slowly soluble in the intestine, while it is insoluble in the stomach, and it has been used in sub-acute or chronic intestinal catarrh. A compound of tannin and diacetyl, named tannigen, has also been introduced on account of its insolubility in water or acids, and its power of breaking up readily in an alkaline medium. It is stated that the efficacy of this drug is not interfered with by the addition of antiseptics, such as salol or salicylate of bismuth.

The diuretic influence of theobromine formed the subject of a discussion at a meeting of the Société de Thérapeutique, and it was maintained that it was superior in its action to diuretin, the sodium salicylate of theobromine; but this latter drug has in sundry instances given much satisfaction as a diuretic in cases of chronic kidney disease.

The position of cocaine as a local anæsthetic has been challenged by the introduction of eucaine, which is said to be equally efficacious as a local anæsthetic, while it is less toxic, and it has no effect upon the pupils. The physiological actions of eucaine have been compared carefully with those of cocaine, and it has been shown by experiment that the new remedy can be used in far larger doses before toxic symptoms are developed. Eucaine produces hyperæmia instead of anæmia, and when applied to the vesical mucous membrane it has caused some hæmaturia. Eucaine has, moreover, the disadvantage of occasionally producing pricking sensations when applied to the eye, or burning sensations when applied to the pharynx, and although these are succeeded by anæsthesia they are undoubtedly likely to interfere with the general adoption of this new remedy. Meanwhile, quite a formidable array of toxic symptoms have been attributed to the use of cocaine, when used medicinally, as a local anæsthetic, or when taken continuously (cocaine habit) and recently a tragic occurrence resulted from the suicidal consumption of a large quantity. These dangers have entailed the employment of resorcin to preserve solutions of cocaine and to diminish their toxic effect; while ammonia and nitrite of amyl have been recommended in the treatment of cocaine poisoning, as have also strychnine and digitalin. Pental as an anæsthetic formed the subject of a discussion before the Society of Anæsthetists, and ethyl chloride has been used as a local application in the treatment of hysterical aphonia.

Among new antiseptics we note salacetol, which on contact with living tissues divides into its component elements—salicylic acid and acetol—while it produces no toxic effects when applied locally; izal, which, it is claimed, is more powerful than carbolic acid and can be used internally or externally; traumatol, which has been employed in the same way as creosote or iodoform; and formaldehyde, which appears to act as a preservative and as a disinfectant, although its irritating properties render its medicinal use almost an impossibility. Europhen has been recommended as a substitute for iodoform, and it is claimed that it is both non-irritating and non-toxic. Several writers have directed attention to the value of picric acid in the treatment of burns, the general opinion appearing to be that when absorbent cotton-wool has been steeped in a saturate, solution of picric acid it may be used to favour the coagulation of albuminous exudations and to promote the rapidity of healing. Formalin gelatin has been advocated as a local application which resists the actions of acids, alkalies, or acid salts; and celloidine possesses similar advantages and is used as a permanent dry-coating for wounds. A new watery varnish has been introduced under the name of "gelanthum," and consists essentially of a solution of gelatin mixed with tragacanth. In favour of this substance it is claimed that it dries rapidly and that it can be readily mixed with drugs.

The year has been notably deficient in antipyretics, in fact the general tendency of modern therapeutics appears to have turned against the employment of medicinal antipyretics, while greater stress has been laid upon other methods of reducing temperature. Still, the external employment of creosote has been recommended in the treatment of malarial fevers, small quantities of the drug being rubbed into the axilla, and the result is said to be superior to the effect of antipyrin. Much attention has been paid, however, to improved methods of administering quinine, and formulæ have been given for the preparation of hypodermic solutions, suppositories, enemata, and other preparations. Sir ALFRED GARROD in a paper printed in our columns gave details of his experience with guaiacum, which he considers has thoroughly established its position as a prophylactic against attacks of gout.

Further investigations during the year have somewhat limited the sphere and utility of permanganate of potassium as an antidote in cases of opium poisoning, and it now appears to be conclusively proved, both clinically and experimentally, that permanganate of potassium can only act upon such opium or morphine as it comes into contact with in the stomach, while it has no power of arresting the action of morphine after absorption. The action of trional has received some attention during the past year, and in one case at least it appears to have produced ataxic symptoms with slow, hesitating speech, these effects speedily passing off when the drug was discontinued. Numerous synthetic preparations have been devised and suggested for employment, but they have not yet had sufficient trial to allow of any definite statements of their efficiency.

Dental Surgery.

The advance made in dental surgery during the year has been of an encouraging character. Politically the profession has been more than usually active, and under the guidance of the British Dental Association a large number of prosecutions have been carried out and the scope of the penal clause of the Dental Act of 1878 has been shown to be of a much broader character than was generally supposed. The annual meeting of this association, which took place this year in London, proved to be the most successful yet held, and it is only necessary to contrast its proceedings with those of the meeting held in London five years ago to see what healthy advance has been made in all sections of the dental world. The continued notice which the General Medical Council pays to dental matters is encouraging, and in this connexion perhaps the most important feature has been the report of the Dental Committee on the inspection of the various examinations by Mr. C. S. TOMES. His reports, so ably compiled, cannot fail to produce good results, and already, we believe, many of the suggestions of the inspector have been carried into practical effect by the various examining bodies. The issue of new regulations for the L.D.S. Eng. may also be regarded as a feature of the year. This examination has been considerably altered in its character; it is now to be divided into three examinations. Several important courses of lectures have been added to the curriculum. Practical courses on Dental Mechanics, Dental Metallurgy, and Dental Surgery now find a place, in addition to a course of lectures on Dental Microscopy, while Materia Medica is erased. The absence of a course of lectures on Pathology is extremely to be regretted, for pathology is the foundation on which a correct knowledge of disease can be obtained. The courses of lectures of Practical Dental Histology and Dental Metallurgy might

also, we think, have been replaced with advantage by more useful subjects. There is to be an examination in Preliminary Science, followed by two in professional subjects. The Preliminary Science is to consist of Chemistry, Physics, and Practical Chemistry, and is to be identical with Part I. of the First Examination of the Examining Board of England. This is a distinct advance, and we hope it will not be long before the College will require candidates to also pass the second examination of the Board. The first professional examination will include Mechanical Dentistry and Dental Metallurgy, and the second Dental Anatomy and Dental Surgery, with General Anatomy, Physiology, and Surgery. The dental schools have been very active during the year, and sufficient proof of this is shown in the opening of a new hospital in Dublin, a school in connexion with the Dental Hospital of Newcastle, and the formation of a dental department of the Sheffield Royal Hospital. The Managing Committee of the Dental Hospital of London is engaged in considering the plans for a new building, and we understand that the new hospital will be commenced at an early date. Several deaths have been recorded from chloroform used as an anæsthetic in dental operations. This is extremely to be regretted in the face of the expert testimony as to the danger of this drug in dental practice. In practical dentistry the main advances have been made in the methods of crowning, more especially in the mode and manufacture of the porcelain varieties. The introduction of solila gold has attracted the attention of many operators, but whether this form of gold is capable of producing reliable fillings has yet to be proved. Several important papers have been published. Mr. C. S. TOMES has contributed some valuable notes on the chemistry of enamel, and has shown that this structure is practically devoid of organic matters and that the portion previously considered to be organic is really water of crystallisation. Our knowledge of the bacteria of the mouth has been enriched by the paper of Dr. WASHBOURN and Mr. GOADY, their researches being mainly concentrated on the streptococci which are met with in the normal mouth. A paper by Mr. CONSTANT on the part played by the blood pressure on the eruption of the teeth is likely to be of assistance in elucidating the cause of this phenomenon. The death list is a small one, but by the death of Mr. GREGSON, who was for many years on the staff of the Dental Hospital of London, one of the few remaining links of the present with the past has been severed.

Ophthalmology.

Up to the present time students of Ophthalmology who desired to familiarise themselves with the appearances presented by the fundus of the eye in health and disease were compelled to seek for the information they required in the foreign atlases of LIEBREICH, JAEGER, PERRIN, and others. They can now, however, owing to the judicious selection by Mr. ADAMS FROST of the numerous and diversified cases that he has had the opportunity of observing, and in part also owing to the ability of Mr. HEAD, the artist by whom the delineations have been made, study at their leisure in Mr. FROST'S Atlas examples of all the more interesting forms of ophthalmic disease drawn upon a scale which renders identification easy. An Atlas of Ophthalmology has also been published in America in which the plates are by Dr. J. OELLER, whilst the text has been translated into English by Dr. KNAPP. As if the student were not sufficiently supplied with manuals upon the eye when in possession of those by BERRY, JULER, NOYES, SCHWEINITZ, SWANZY, and a score of others, we have had occasion to review within the last few weeks two complete treatises which have just appeared—one by Dr. ST. JOHN ROOSA and the other by Dr. EUGEN FICK, neither of which, though both are well written, presents any remarkable advance on their predecessors. Dr. KNIES has, however, made an important contribution to ophthalmic literature in his volume on the Relations of the Eye to General Diseases, which he justly regards as forming a supplementary volume to every text-book of practical medicine and ophthalmology. A System of Diseases of the Eye on a large scale has been projected by Dr. W. NORRIS, aided by numerous contributors from various countries, and the first volume, embracing the Embryology, Anatomy, and Physiology of the Eye, has appeared.

Professor UHTHOFF has devised a simple instrument for keratoscopy which consists of the usual arc of an ophthalmometer on which alternate black and white lines are drawn from end to end; the reflection of these from the cornea, when they are well illuminated, demonstrates by their separation or approximation the position and, to some extent, the degree of irregular prominence or flattening of the cornea. Dr. GEORGE WEILL has described an instrument for the division of secondary cataract which resembles one half of an arrow-head split longitudinally having a cutting edge, which is introduced through the cornea in a horizontal direction. The blade is then turned upon its axis, made to penetrate the capsule, and withdrawn, the recurved part having also a sharp edge, which divides the membrane. Such an instrument possesses the disadvantage of a hook in making traction on the parts if the capsule is tough. Dr. PFINGET has done good service in making careful observations at different periods of the degree of astigmatism that follows operations for cataract. He shows that whilst large at first it soon diminishes and to a great extent disappears in the course of a few weeks, and that slow improvement continues for some months. It is, perhaps, worth noting by microscopists that according to Dr. F. W. ELLIS persistent closure of the eye in using the microscope is apt to produce irregular astigmatism, which, although at first only temporary, occasionally becomes permanent. In microscopic research both eyes should be kept open, the unused image being soon suppressed.

Several foreign as well as English surgeons, amongst whom Mr. J. B. LAWFORD is conspicuous, have practised the removal of the transparent lens in high degrees of myopia, and from the results that have been obtained it seems to be, at least under certain restrictions, a justifiable operation. It is evident that it should not be undertaken unless the degree of myopia is high and affords indications of becoming greater. The eye should be otherwise fairly healthy, and the patient should be neither too young nor too advanced in years. The method by which the lens is removed has usually been by discission, the softened lens substance being allowed to escape by a small opening in the cornea, in the course of a fortnight or three weeks, with or

without the introduction of a grooved curette. In some instances the usual operation for the removal of the lens by corneal section has been adopted with success.

It was to be expected that attempts would be made to utilise the Roentgen rays in the surgery of the eye with the object of discovering the presence and position of foreign bodies that had penetrated the sclerotic or cornea and were lodged in the interior of the globe, and some praiseworthy efforts in this direction have been made; but the position of the organ is unfavourable to this mode of examination. Several observers have recommended the employment of electricity in the form either of continuous or interrupted currents as a remedy for inflammation of the external and internal tissues of the eye.

The Histology of the Retina has been the subject of an elaborate research by S. RAMON Y CAJAL, who has published a memoir giving the results of the great technical ability he possesses in the elucidation of the structure of the retina in birds. He both describes, and gives drawings illustrating, the wonderful complexity of the outrunners or dendrites of the several layers, which support his well-known views in regard to the free terminations of such processes and their mode of enclosing or embracing other cells without coming into immediate continuity with their substance. Dr. LINDSAY JOHNSON has also devoted much time and attention to the structure of the retina, and has satisfied himself that certain zones may be differentiated in the retina of man and the primates, in each of which a special and characteristic disposition of the constituents of the several layers may be recognised, a discovery which, if substantiated by other observers and generally accepted, may lead to an explanation of some at present very obscure pathological lesions. Dr. JOHNSON has also examined ophthalmoscopically and obtained most beautifully executed drawings of the fundus oculi in a great number of the mammalia, and has found characteristic differences in the various orders and families showing evolutionary progression; his investigations have led him to believe that the eye may be found of service in determining doubtful points in classification.

In ophthalmology the numerous journals devoted to this subject in every country give the records of an immense number of cases, and many short essays read before societies which, however interesting individually, are hardly of sufficient importance to be alluded to in a general review of the subject. Amongst the new remedies that have been proposed or employed have been eucaine, fluoride of sodium or fluorol, formalin, ichthyol, nosophen, and ethyl diamine as antiseptics; brombydrate of arecoline as a myotic; and mydrol as a mydriatic.

Forensic Medicine.

The main features of the year's history of legal medicine have been, firstly, trials in the High Court, in which medical men have figured either as plaintiffs or defendants or both; and secondly, the long list of cases of criminal abortion, an offence which is still rampant in spite of exemplary punishments. In the former category we may note the *cause célèbre*, KITSON *v.* PLAYFAIR, in which Mr. and Mrs. KITSON sued Dr. PLAYFAIR, their relative by marriage, for slander. It will be remembered that Dr. PLAYFAIR attended Mrs. KITSON for metrorrhagia and removed what he believed to be the products of a recent conception. The alleged slander consisted in the communication to a third person of the facts and belief founded upon them. In defence non-publication and privilege were pleaded, but justification was not entered. The jury found for the plaintiffs on all issues and assessed the damages at £12,000. Notice of appeal was given, but no further legal action was taken. Incidental to the main question at issue the more general one of professional etiquette and privilege was raised. Mr. Justice HAWKINS, who presided at the trial, made some important remarks, which in the main tended to deprecate divulging of professional secrets even where possible criminality might be inferred.

Miss BREAY, as a member of the Royal British Nurses Association, sued Sir JAMES CRICHTON BROWNE, who had presided at a meeting of the Association, for damages for refusing to accept a resolution or amendment. One farthing was the amount assessed. Upon appeal to a Queen's Bench Divisional Court the judgment was reversed on the merits of the case, and upon the additional ground that Miss BREAY could not sue in her individual capacity but in her corporate capacity only.

Quite recently a painful case occupied the Court for eight days. It was one in which a medical man, Dr. STIVEN, brought an action for slander against a brother practitioner, Dr. WELSFORD. The plaintiff gained a verdict with £75 damages. Notice of appeal has been given.

Dr. CULLINGWORTH, obstetric physician to St. Thomas's Hospital, after undergoing what we may justly define as persecution for four years at the hands of Miss BEATTY, a patient on whom he had operated, had to defend an action for damages in the Queen's Bench. The allegation was that, in spite of the expressed wish of the plaintiff, Dr. CULLINGWORTH performed double oöphorectomy. It was proved at the trial that some time prior to, and immediately preceding, the operation the defendant promised only to do what in his judgment he deemed necessary in the interests of his patient, but declined to be limited in his procedure. To this Miss BEATTY, as the jury believed, gave at least an implied assent. Both ovaries were found to be so extensively diseased that Dr. CULLINGWORTH was of opinion that it would be useless to preserve one, leaving the patient to the practically certain danger and annoyance of another major operation, and accordingly he removed both. With our deepest sympathy for Dr. CULLINGWORTH we trust that his bitter experience will be the means of more completely protecting medical men against charges of malpraxis. It will serve to make them doubly careful to obtain a written permission where there appears the least hesitation in giving a verbal one, particularly in cases where the nature and extent of operative procedure can only be ascertained when the patient is under an anæsthetic.

At the Totnes County-court Mr. HAYWARD, a local medical man, had to defend a claim for damages for alleged carelessness in diagnosis and treatment. The plaintiff injured his shoulder. The main question in dispute was whether there was a dislocation of the clavicle on to the acromion. It is matter of surprise that the medical testimony should have been so conflicting. On the one side it was contended that the dislocation still existed; on the other, that there was none, but that it was simulated by

enlargement of the acromial end of the bone. It was probably Mr. PICK'S lucid exposition that exculpated Mr. HAYWARD.

In the long list of trials for criminal abortion the most important was that of Dr. TIMOTHY SIDDALL JONES, who was indicted for the murder of a young woman by performing an illegal operation. Mr. Justice MATHEW charged the jury that if they believed the evidence they must convict of the capital offence. A verdict of "Manslaughter" was nevertheless returned, and the prisoner was sentenced to penal servitude for life. An accomplice—an unqualified assistant—was found guilty of being an accessory after the fact. The original punishment in his case—five years' penal servitude—has upon reconsideration been reduced.

At the Wiltshire Assizes two women and a man were convicted of having procured abortion and received sentences, two of five years and one of seven years imprisonment. An interesting feature in the case related to the admissibility of dying declarations. It appears that although the woman was aware of her imminent peril of death she made use of an expression which negatived the essential condition of a dying declaration. "I might get better; I mean to have a good try," she said. Mr. Commissioner BOSANQUET, Q.C., refused the declaration as a dying deposition, but accepted it as evidence against the two women, who were present when it was read over to deceased. At Bedford assizes an unqualified medical man was indicted for having given medicine for the purpose of inducing abortion in a married woman. He was committed on the coroner's warrant, but the magistrates dismissed the case. The grand jury threw out the bill.

There have been but few cases of special interest of poisoning during the year. A number of deaths from anæsthetics have occurred. In most of them chloroform was the agent and several have occurred in dental practice. We note with regret that the pernicious method of administering the drug upon a towel is still commonly employed. In one case nitrous oxide and ether and in another the A.C.E. mixture followed by ether were the anæsthetics used and in a third ether alone was given.

A conviction of a vendor was obtained before a magistrate for having sold tinned peas coloured with copper. As much as 3·16 grains of the salt were contained in a tin. This amount must be considered as injurious to health.

Professor MIDDLETON succumbed to morphia poisoning. It appears that he had been in the habit of obtaining from a druggist for many years as much as twenty-four bottles at a time of a solution containing twenty-four grains of "essence of morphia," whatever that may have been. This was dispensed from a prescription which the druggist had used for twenty-two years. We have adverted to the danger incurred under such repetition of the dispensing of dangerous drugs without obtaining the signature of the prescriber afresh.

Bromide of potassium seems to have been responsible for one death. The deceased had taken it in from 2-drachm to 3-drachm doses for a long period for neuralgia. It was not a case of poisoning pure and simple, but the bromide had undoubtedly conduced to the cardiac failure—the proximate cause of death.

Several cases of poisoning by arsenic have happened through persons ingesting pieces of "rat-cake" which had inadvertently been thrown into the streets. In more than one instance sewer-air has proved fatal, and the chief agent seems to have been sulphuretted hydrogen. Of course, there are other gases present, such as carbonic acid and carburetted hydrogen. We have insisted on the necessity of precautionary examinations of traps and manholes before workmen are allowed to enter them. The testing is best carried out by using Clowes's hydrogen lamp, and moist plaster-of-Paris cakes impregnated with a soluble lead salt.

Biology and Physiology.

It is a matter of great satisfaction to the profession that one of their body should, by his high scientific knowledge and by the successful application of that knowledge to practice, have attained the distinguished position of President of the Royal Society, and in the next ensuing year be elected to the Presidentship of the British Association for the Advancement of Science. LISTER'S inaugural address dealt naturally with the subject he has made his own, the Contest of Surgery and Medicine with Micro-organisms. The opening addresses in the Geological and Zoological Sections by MARR and POULTON respectively were eloquent in regard to the time required for the evolution of the fauna at present existing on the earth. Arguments derived from many sources and circumstances were accumulated to show that periods of time, too vast to be conceived, have elapsed since the first appearance of life on the planet, for types, not of low, but of high development are to be found in geological formations belonging to very remote eras. Some of the problems of descent have been discussed by able biologists, as by D. H. SCOTT STEWARD, and HENSLOW in reference to plant-life, and also in regard to animals of the vertebrate series by GASKELL, who maintains that there is much evidence to demonstrate their origin from the arthropods instead of, as is usually admitted, from the tunicates of the invertebrate kingdom. The nervous system of the vertebrate, he points out, presents a central tube lined with epithelium, which in his view was originally the alimentary canal of an arthropod such as the limulus. A segmented nervous system gradually invested the walls of the canal, the cephalic stomach of the limulus becoming the ventricular cavities of the brain; whilst the straight intestine is represented by the central canal of the spinal cord, the mouth tube by the hypophysial tube, and the terminal portion by the neurenteric canal. These gradually ceased to discharge their functions, and in the vertebrate a new foregut arose in connexion with, and as an outgrowth from, the lamellar branchial chamber, which opened posteriorly into the cloacal region by a short tube. With the elongation of the body the tube became longer and constituted the new intestine, and with a rather large demand for collateral changes the arthropod became a vertebrate.

The germination of seeds obtained from Egyptian mummy cases has been doubted, but the recent experiments of DE CANDOLLE of Geneva show at least that seeds long continue to possess the power of germinating when placed under circumstances in which life can exhibit none of its activity. Seeds of corn, oats, fennel, mimosa, and others were exposed to a temperature of 40° F. below zero for four months, yet when placed under favourable conditions normal seedlings were produced. The observations of

ROBERT BROWN long ago showed that the seeds of nelumbium which were more than a century old were capable of germination. Hence DE CANDOLLE draws the conclusion that protoplasm in resting seeds is not analogous to a smouldering fire, nor is it dead, but is endowed with potential life, its constituents like the material particles of gunpowder being able, when placed under favourable conditions, to develop active powers. Valuable papers have been contributed to scientific botany by VINES on the suction force of branches, showing that branches possess a high suction power even when deprived of their leaves or perfectly desiccated, and when, therefore, the effects observed could not be attributed to transpiration, but were probably due to cell imbibition and to atmospheric pressure. Important investigations on cell division have been made by FARMER and ETHEL SARGANT; whilst the polymorphism of the green algæ has been discussed by CHODAT of Geneva.

In Histology the result of the researches of numerous inquirers has been to support the views of the Spanish microscopist RAMON Y CAJAL in regard to the inter-communication of cells and the mode of termination of their processes, showing that in many cases where direct continuity of substance between more or less remote cells was believed to exist an interspace is really present over or through which the nerve impulse must leap in order to be transmitted from the axis cylinder of one cell to the substance of another cell. Abundant evidence has been obtained that as shown by the methods of preparation now at our disposal the axis cylinder of one cell breaks up into ramifications which partially surround or embrace the cell body with which they are in association. Finding that the neuroglial cells are sometimes small with greatly ramified processes, and sometimes large with simple processes, RAMON Y CAJAL has suggested that these are only two states or forms of the same cells, and has constructed a hypothesis to explain sleep. In repose, like the cutaneous chromatophores of various animals in darkness, the cells are expanded, extended, or spread out with numerous ramifying dendrites which interpose themselves between the axis cylinder digitations of one cell and the protoplasmic processes of another, and no nerve current passes. In active states of the nervous system, on the other hand, the neuroglial cellules contract, their processes are withdrawn, and the axis cylinder processes and the protoplasmic processes of adjoining cells come into contact, with consequent passage of the nerve current. RAMON Y CAJAL'S histological statements have been, in the main, supported by the veteran histologist KÖLLIKER, who has just completed the second volume of a new edition of his well-known Histology, in which he gives a description of the nerve centres, enriched and illustrated by several hundred drawings nearly the whole of which are original and will prove of the greatest value alike to the anatomist, the physiologist, and the physician. As the result of a large number of experiments WESLEY MILLS, in a paper read before the Canada Medical Association at Montreal, finds that very different degrees of excitability exist in the cortical centres of the brain in different animals, and, further, that such cortical centres are not equally well organised in the same animal; thus in the rabbit the centres for facial movement and those of the forelimb are better developed than others; whilst in the dog and cat the centres for the forelimbs are better organised than those for the ear and tail.

It is gratifying to find that the Research Scholarships instituted by various corporations are beginning to yield good fruit. Thus HILLS, who holds the Research Scholarship instituted by the Grocers' Company, has written an important essay on the physiology and pathology of the cerebral circulation, in which he sustains the view originally maintained by KELLIE that the volume of blood in the brain under physiological conditions varies but little; whilst he has in addition satisfied himself that there are no, or but few, vaso-motor nerves distributed to the cerebral vessels, which, if the large branches of the sympathetic nerve that accompany the carotids be considered, seems to require confirmation. J. S. RISIEN RUSSELL again, who is Research Scholar to the British Medical Association, has brought before the Royal Society a detailed description of the effects of the division of one inferior peduncle of the cerebellum, in the course of which he has shown that in the disorders of equilibration which result the direction of rotation is always towards the side of the lesion. The investigations of J. N. LANGLEY on the nerve cell connexion of the splanchnic nerve fibres are of great interest, showing that each visceral nerve fibre that leaves the spinal cord and each division of it is connected with one nerve cell only, which may be situated in a pre-vertebral ganglion like the solar ganglion, or in one of the more peripherally lying collateral ganglia. The question of the relation between temperature and excitability in nerve and muscle has been attacked by GOTCH and MACDONALD, and their experiments show that the frequently repeated statement that increased excitability occurs with increased temperature must not be taken without restriction, since it by no means follows that such tissues become more excitable to all forms of stimulus as the result of an elevation of temperature: in each case the nature of the tissue and the nature of the stimulus require to be investigated. LANGLEY and ANDERSON have devoted a long paper in the *Journal of Physiology* to the arrangement and distribution of the visceral nerves in the pelvis and adjoining region in the rabbit, cat, and dog, which, from the complexity of the subject, must have cost much time and labour.

The recent treatises on Histology at the command of the student are both numerous and excellent. In addition to the very valuable histological account of the tissues given by SCHÄFER in "Quain's Anatomy" and CLARKSON, the treatises of STOHR, BOHM, and DAVIDOFF, and of KÖLLIKER (to which reference has already been made), if he can read German, are at his disposal; whilst, as supporting HERBERT SPENCER'S opinion of the disposition of knowledge to integrate, the elaborate monographs of OBERSTEINER on the Histology of the Central Nervous System, of EDINGER on the Comparative Anatomy of the Brain, and of OPPEL on the Comparative Anatomy and Histology of the Stomach may be mentioned. SPALTEHOLZ has published a beautifully executed Atlas of the Bones, Ligaments, and Muscles. Excellent treatises on Development have been published by SCHULTZE and by SCHENK. D. J. CUNNINGHAM has produced a good Manual of Anatomy, and new editions of many of the

treatises on Physiology have appeared. Attention may be called to a more ambitious work that is now being issued by RICHET, under the title of the "Dictionnaire de Physiologie," in which the editor has the advantage of the collaboration of some of the best physiologists in France. In this country HALLIBURTON has re-written "Kirkes's Physiology," bringing it well up to the present date and in fact leaving very little of the original work. WALLER, ANDERSON, STEWART, and STARLING have each published Manuals of Physiology which are most satisfactory in the clear and intelligent manner in which this rapidly advancing subject is dealt with. The monumental work of HELMHOLTZ on Physiological Optics has at length been brought to a conclusion by KÖNIG, the changes in the last few sheets being few and unimportant.

The subject of the Blood has attracted the attention of several observers during the past year. One of the principal investigations upon it has been carried out by HALDANE and J. L. SMITH, whose conclusions are that the oxygen tension of human arterial blood as it leaves the lungs is about 26·2 per cent. of an atmosphere or 200 millimetres of mercury, and that the process of diffusion alone does not explain the passage of oxygen from the air of the pulmonary alveoli to the blood. PICKERING has continued the experiments of HALLIBURTON and BRODIE on the absence of intravascular coagulation of the blood after intravenous injection of an active solution of nucleo-proteid in albino rabbits although it occasions clotting in black or brown rabbits, and has shown that on such injections being made in rabbits, at one season white and at another pigmented, clotting occurs when the animal is pigmented, but not when in the albino state, demonstrating that a direct connexion exists between the two, which PICKERING seeks to explain. WAYMOUTH REID and PAVY severally propose methods for the estimation of sugar in the blood. An article on Hæmodynamics bristling with formulæ, which will delight those who are devoted to mathematics and is a revision of a thesis for the degree of M.D. at Cambridge, has been published by W. NICOLLS of Peterhouse.

Some interesting researches from a dietetic point of view have been made in the University of Cracow by WRÓBLEWSKI upon the influence of various acids and pepsin in promoting the digestion of proteids, especially casein. The several acids—twelve in number—were all reduced to the same strength as determined by their neutralisation by soda, and the results showed that the pepsin of the child, dog, and pig differed in their behaviour with different acids and are not therefore identical; that oxalic acid was the most active, followed closely by hydrochloric acid; and that some alkaloids, especially caffein, materially assist the digestion of proteids.

The influence of various drugs and of electrical currents on the hearts of mammalian embryos has been particularly studied by J. W. PICKERING, who shows amongst other points that cardiac inhibition by interrupted currents first occurs at the age of 150 hours. Constant currents of the strength of one milliampère increase the force and frequency of the embryo chick.

Our knowledge of parts that seem at first sight to be most difficult to explore, and as it were withdrawn from observation, is gradually extending. Thus HUTCHISON has made careful researches into the chemistry of the Thyroid Gland and has shown that it contains two proteids, one of which, small in quantity, is a nucleo-albumin, whilst the other is a colloid and contains phosphorus and iodine, and is large in quantity. By gastric digestion the colloid is split up into a non-proteid and a proteid substance, the former of which is the active agent in the gland. The thyroid gland has also been recently the subject of research by NOTKIN of Kiew, DENNIG of Munich, BLEIBTREU and WENDELSTADT, L. BLUMREICH and M. JACOBY, and by ROOS of Freiburg in Breisgau. The first-named observer has obtained a substance from the gland which he has named thyreo-proteid and which possesses poisonous properties, producing in toxic doses tetanoid symptoms. DENNIG finds the administration of thyroid extract greatly augments for a time the excretion of nitrogen, followed by diminished excretion. BLEIBTREU and WENDELSTADT also find an increased excretion of nitrogen under its use. ROOS recognises the presence in the gland of an active principle which is of stable composition and is certainly not an enzyme. ROOS'S analyses of the thyroid gland and BAUMANN'S of the thymus gland show the constant presence of iodine as a normal constituent of those glands, the quantity present in the thymus varying from 2·5 to over 6 milligrammes in the whole gland. Lastly, KOSSEL and NEUMANN have carefully compared the properties of thymus-nuclein acid and thymic acid. The Suprarenal Capsules have been investigated by A. PETTIT, GOURFEIN, and L. SZYMONOWICZ. PETTIT dwells as indications of their importance on their derivation at a very early period from the germinal epithelium of the cœlom and on their intimate relation with the great vascular trunks of the abdomen. In the amphibia, reptiles, and birds there is a suprarenal portal system. It is, he thinks, probably to be ranked with the thyroid body and its secretion is internal and demonstrable by histological processes. GOURFEIN shows their great influence on the general nutrition of the body, and states that the retention of one is sufficient to preserve life, whilst like the thyroid gland they act chemically on the organism. SZYMONOWICZ found that extracts of the adrenals whether made with water, alcohol, or glycorus, caused strong contraction of the arteries with corresponding rise in the blood pressure, which is augmented after section of the vagus. The histology of the Pancreas in the sheep has been well worked out by E. LAGUESSE. The pancreatic juice has been shown by HALLIBURTON and Dr. BRODIE to have a special action in the dog on milk, differing from that of rennet and producing a precipitate they provisionally name pancreatic casein. The development of the Liver has been followed out with much care by A. SWAEN. The result of a long series of researches by A. GARROD and HOPKINS on the unstable compound urobilin shows that from whatever source derived—whether from normal or morbid urine, from fæces or from gall—it always, when properly purified, presents the same chemical reactions and the same spectrum. Finally, the applications of the Phonograph have been the subject of an address by MCKENDRICK, who has shown that many musical instruments give characteristic tracings, and that variations in the relative pitch of sounds quickly following one another can be perceived by the ear in a space of time not exceeding

perhaps one-fiftieth of a second or when the special vibration has been repeated only ten times.

Some very curious experiments on Frogs have been made by MAX VERWORN of Jena and published in "Pflüger's Archiv," in which tonic reflexes affecting the muscles of the body and limbs were induced by mechanical stimulation of the skin of the back and flanks. The animals were gently rubbed with the wetted forefinger and thumb whilst in the ordinary squatting position. After a short time, and more particularly if the brain has been removed and the animal is left at complete rest for a day or two, the forelimbs are extended, the hind limbs first slightly separated, and then extended rigidly or drawn up. This general tonic contraction of the muscles may last for an hour or more and always longer in the brainless frog. The tonic reflexes only occur on mechanical stimulation of the flanks and are not observed in response to electrical or chemical excitation. A long and elaborately worked-out article on Origin of the the Cardiac Movements and the Physiological Characters of the large Cardiac Veins of the Frog has been contributed to "Pflüger's Archiv" by T. W. ENGELMANN.

Anæsthetics.

The central point of interest in anæsthetics in 1896 has unquestionably been the celebration of the centenary of the discovery of ether. The story of that discovery is even now an unraveled skein as far as the just apportionment of credit to individuals is concerned. The interesting centenary celebration held in October of this year at Boston, the facts of which were reported in our columns, gave honour to two American citizens, W. T. G. MORTON and C. T. JACKSON. No words can exaggerate the immense importance of this discovery to surgery. Certainly the mouse—anæsthesia—has liberated the lion—surgery—from the net of many disabilities, and so it is not wonderful that the profession as a whole has taken great interest in the anniversary. Next in importance to the discovery of the application of anæsthetics to surgery comes the attempt to evolve safer methods and more precise knowledge of the agents employed. By the death of BENJAMIN WARD RICHARDSON, the friend and biographer of SNOW, the profession has lost one who in his day and generation did yeoman service in this direction. The various papers contributed by RICHARDSON, who dealt mainly with the chemical aspect of anæsthetics and sought to evolve the ideal substance by studying the various properties of the radical and haloid constituents of those bodies already in use, have done much to increase our knowledge. In "methylene" he fondly hoped that ideal had been consummated, and it was no fault of his if further experience with "methylene" somewhat lessened its repute and showed it to be no better than its older competitors. Ether spray, although used by CHARDSON for capital operations, has not achieved a lasting success, save in minor surgery. In our columns [1] we published what was probably RICHARDSON'S last contribution to the literature of anæsthetics—a paper entitled "The Next Great Advance in Anæsthesia," which is remarkable in its way and typical of its author's versatility of thought and inventiveness. Certainly the conclusions he arrives at are not as yet to be accepted as proven, but he would be a bold prophet who affirmed that much of RICHARDSON'S close and incisive reasoning will not as years go on fall into the line of adopted dogma. As the references to nitrous oxide as a simple asphyxiant and the bolstering up of "methylene" show RICHARDSON had not kept quite in the tideway of our present knowledge of the physiological action of anæsthetics. Among books dealing with anæsthetics issued during the year perhaps the most weighty is the the reprint of the Reports of THE LANCET and the Hyderabad Commissions on Chloroform. The importance of the work is attested by the widespread notice it has aroused and the rhodomontade elicited from the less well-informed among those critics who cannot accept unpalatable opinions when out of harmony with their preconceived ideas. SHEILD and HEWITT [2] contributed a useful paper on Posture during Anæsthesia for Surgical Operations. Extreme extension during the induction, and flexion owing to the narrowing of the air-way (BOWLES) are deprecated and the importance again urged of turning the patient, or his head into the latero-dorsal posture to facilitate drainage from the mouth. LEONARD HILL'S important conclusions with regard to the influence of posture on the functions of life naturally take an important place in this question. He shows that under chloroform the influence of gravity may be of vital importance—e.g., in emptying the cranial and thoracic circulation into the abdominal during the erect, or partly erect, posture, while a sudden return to the head-lower-than-the-heels position may, by "bleeding" back from the splanchnic area into the heart, over-tax that organism and cause syncope. HILL'S practical deductions are worthy of quotation. In circulatory failure he advocates gradual elevation of the feet and trunk about the head level and bandaging of the abdomen. The raising of the feet also quickens respiration and renders it more abdominal in type. Some important points in connexion with the state of the blood during anæsthesia were raised by GEORGE OLIVER in his Croonian lectures. [3] He finds, while chloroform lessens the arterial calibre, ether increases it, nitrous oxide being intermediate between them; whereas when nitrous oxide is given with oxygen, or in such a way as to exclude asphyxial phenomena, a slight increase (ether effect) of arterial calibre follows. Referring to COSTA'S work on the effects of ether on the blood constituents, OLIVER states that his observations—few, however, in number—go to show that ether produces slight changes in the corpuscles. Dealing with this subject, DUDLEY BUXTON, in his lecture on the Nature of Anæsthesia, [4] suggests that the oxygen capacity of the blood corpuscles becomes altered by the various anæsthetics, and so the tissues become more or ess profoundly affected, and even destroyed, from oxygen starvation. He has found that under chloroform, ether, and nitrous oxide destruction of blood corpuscles actually occurs, although he is not as yet able to show certainly how far other factors—e.g., nerve shock, hæmorrhage, posture, &c., influence the results at which he has arrived. WALLER [5] has found some very striking phenomena occurring in

[1] THE LANCET, April 18th, 1896, p. 1047 et seq.

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxix.
[3] THE LANCET, June 6th, 1896, 1541, et seq.
[4] THE LANCET, Feb. 1st, 1896, p. 279.
[5] Proceedings of the Physiological Society, vol. xix.

isolated nerves brought under the influence of chloroform, ether, or carbonic anhydride. The conclusions arrived at are that chloroform is more toxic (i.e., permanent abolition of excitability) than anæsthetic (i.e., temporary abolition of excitability followed by perfect recovery), ether is more anæsthetic than toxic, and carbonic anhydride is most anæsthetic and least toxic. He further examined the effects of carbonic anhydride and ether upon the polarisation increment, upon electrotonic variations and upon electrotonic currents, and found that the ordinary electrotonic currents of normal nerve cannot be characterised as purely physical or distinguishable from true physiological currents by anæsthetics. Variation in currents—e.g., negative, or the positive after-variation and the electrotonic current—are modified by anæsthetics, while polarising currents sent through a nerve are not appreciably altered by them. BENEDICENTI[6] has shown that under different atmospheric pressures the elimination of chloroform is affected; under lower pressures the pulmonary output is increased. Its elimination generally is more rapid during the first half-hour and then diminishes. Under lowered pressure the action of chloroform is more rapid but less persistent. Various papers have appeared recommending the use of oxygen with, or in succession to, chloroform and ether. While CORISH, ELDER, DE HART, MORRISON, and NICHOLSON extol oxygen so employed, others speak of the resulting anæsthesia as unreliable. MARTHEN contributes an important paper[7] on the Causes of Death under, and after, Chloroform. He asserts that an acute fatty degeneration of the parenchymatous viscera follows chloroform as it does phosphorus, and he has met with demonstrable cases. In dogs the hearts are more affected, but in human beings the kidneys suffer most. FRAENKEL records three cases out of five deaths in which the heart muscle was broken up. FRIEDLÄNDER and others have made important observations on the action which chloroform has on the epithelium of the kidneys. Albuminuria is, according to him, occasioned commonly after chloroform, and if pre-existent is increased after it. He believes the loss of oxygen in the blood, the destruction of corpuscles, and the presence of free chlorine in the tissues from splitting up of the chloroform occasions the renal destruction. EISENDRAHT comes to a similar conclusion. The methods of local anæsthetisation by SCHLEICH'S Infiltration plan have received much support, and papers by SCHLEICH, LUNN, LANDERER, HALSTED, and HOFMEISTER have appeared and bear out SCHLEICH'S original contentions. ROSENBERG, who combines the use of cocaine with chloroform, has found a supporter in GERSTER,[8] who found the method very successful in 100 cases. A large number of fatalities have unhappily to be reported, but it is probable that a lower percentage of deaths occurs, although a more alert press publishes what were in years gone by carefully kept out of print. Other anæsthetics have not received much notice. Papers on Pental by PRINCE, STALLARD and DUDLEY BUXTON have not shown a very hopeful prospect, for that substance. HENNICKE'S work with DRESER would appear to increase our knowledge of the action of bromide of ethyl, and to demonstrate that it undergoes decomposition in the tissues.

[6] Archives Italiennes de Biologie, vol. xxiv., 3.
[7] Berliner Klinische Wochenschrift, March 9th, 1896.
[8] Annals of Surgery, January, 1896.

KELSON, who has used it in out-patient surgery in a few cases, comes to a favourable conclusion. Unquestionably this year, 1896, has been one in which anæsthetics have been more scientifically studied, and the profession has shown itself keenly alive to the importance of such study alike for their patients and themselves.

The Mirror of Hospital Practice.

There has been no diminution in the value of the cases brought before our readers in this department of THE LANCET during the past year, and a review of some of those which appear to us of the greatest importance may be of interest to our readers. During the previous year the largest number of cases were derived from the surgical wards, and again this fact may be noted. The careful notes of cases sent from our colonies show that the traditions of the profession in the mother country are kept in remembrance, while the excellent work being done in all parts of the world testifies to the quick spread of scientific knowledge.

The effect of antitoxin in diphtheria has been so carefully considered from its clinical aspect by the medical officers of the fever hospitals that we have not published much on the subject in this department of THE LANCET. As regards the value of the tetanus antitoxin there is still room for doubt, and the experience of the past year does little to help the hesitating in making up their minds on the subject. A man aged twenty-four years was under care for lacerated and contused wounds of the hand and leg. The leg being severely crushed, was amputated. Trismus developed on the eighth day and antitoxin was injected, but there was not the slightest sign of improvement, and the patient died on the twelfth day after the receipt of the injuries. A man aged fifty years began to have difficulty in opening his mouth ten days after amputation of a toe for injury. Antitoxin was first employed on the seventh day after the commencement of symptoms, when the condition was very bad, and he died next day. A woman aged twenty-one years had a miscarriage seven days before the commencement of symptoms of tetanus. Antitoxin was given by subcutaneous injection the day after admission and five days after the first symptom of tetanus. She died two days later. The only example of its successful use was in the case of a boy aged seventeen years who had shot himself in the left hand. Stiffness of the jaws supervened on the twelfth day. Two days later antitoxin was given and the boy was well in three weeks. The type of the disease apparently varied greatly in the different patients.

A case of malignant endocarditis responded both promptly and satisfactorily to treatment with anti-streptococcic serum. The patient was a boy aged thirteen years, admitted with a history of sleeplessness, weakness, troublesome cough, feverishness, and delirium. He was dusky in colour and had a high temperature, and later streptococci were found in the blood. The cardiac dulness was increased, a thrill was felt over the apex, and a double murmur could be heard over the same region.

Amongst the rarer conditions of disease reported from the medical wards may be mentioned:—1. A large aneurysm of the heart, involving chiefly the anterior wall of the left ventricle, supposed to have been caused by intense and frequent paroxysms of mental emotion. The patient was a

female lunatic aged fifty-seven years and predisposed to cardiac trouble by syphilitic affection of the heart muscle. 2. A school-girl aged thirteen years who passed into a state of coma which lasted for a month after an epileptiform seizure. This prolonged period of unconsciousness is most unusual, although epileptics vary very much as to the duration of the sleep which follows a fit.

Amongst the more interesting results of traumatism which fortunately terminated in recovery we would remind our readers of the following:—1. A suicidal wound of the abdomen extending from above the left anterior superior spine to the spine of the ilium on the other side, dividing the abdominal muscles and the peritoneum, this latter for about five inches only. The intestines escaped from the wound and the collapse was very severe. Saline infusion was practised with much benefit and a good effect was also derived from rectal injections. The intestine was cleansed and returned. Much difficulty was encountered in uniting the severed muscles. The epigastric arteries required ligature. 2. An intra-peritoneal rupture of the bladder in a woman aged twenty-eight years caused by the fall of a heavy body across the abdomen as she was lying on the floor. Operation was performed fifteen hours after the injury. A rent with torn edges three and a half inches long was found extending from the summit backwards and slightly to the left. Two rows of Chinese silk sutures were used to close the opening, some twenty to thirty in all. With the exception of a slight attack of cystitis the patient made an uninterrupted recovery. 3. Rupture of the diaphragm in a boy the result of a crush. The stomach passed through the opening into the left pleura. The symptoms which followed recovery from immediate shock were those of an empyema. The diagnosis was placed beyond doubt as some of the stomach contents were withdrawn on aspiration of the chest. 4. Punctured fracture of the upper wall of the orbit with wound of the brain substance. This is one of the few recorded cases in our literature of recovery after this form of "thrust" fracture. The orbital wound was first explored and later a part of the frontal bone was removed. 5. Compound fracture of the thyroid cartilage for which tracheotomy was required for the relief of urgent symptoms due to swelling of the mucous membrane, and later thyrotomy for removal of a cicatricial web which had formed and completely obstructed the larynx. One case is chiefly interesting from the point of morbid anatomy. It was an example of spinal concussion in a coal porter, which proved fatal on the third day. *No proof of injury* to, or disease of, either spinal cord or brain was found at the post-mortem examination.

Want of space alone prevents our referring to several cases of perforation in disease of the appendix, although they are of importance, and we can but refer to some abdominal conditions of greater rarity which mark an advance in surgery or, at all events illustrate some of its more modern developments. A patient with typhoid fever showed the symptoms of perforation of one of the ulcers. Abdominal section was performed as soon as possible, a ragged opening was found at the base of an ulcer situated eight inches from the ileo-cæcal valve, through which blood, intestinal gases, and fæculent matter had passed into the peritoneum. The opening was sutured after Lembert's method, the peritoneum cleansed, and the wound closed. The patient died from exhaustion about thirty-six hours later. We have published three cases of perforation of gastric ulcers, all of them operated on early and with success. 1. A female aged twenty-eight years; operation was performed six hours after perforation. The ulcer was near the cardiac end and the lesser curvature of the stomach. Three rows of sutures were employed and a drainage-tube passed into Douglas's pouch. 2. A female aged nineteen years; operation was performed three and a half hours after perforation near the œsophageal opening. The edges were pared and two rows of sutures inserted. A tube was left in the wound. 3. A male aged thirty-two years; operation was performed six and a half hours after perforation. The ulcer was situated on the upper part of the stomach near the pylorus. The opening was surrounded by so much induration that the sutures would not hold, so the omentum was used as a plug and sutured in the opening. The wound was closed. In all these a median incision was made through the abdominal walls.

A case illustrating a rare pathological condition as well as a surgical success of note was that of tumour (fibromyxoma) of the small intestine which had produced intussusception. Resection of the affected bowel with the tumour was effected and the ends of the intestine united with Murphy's button. Great advantage was found from the rapidity with which the union of the bowel after resection could be performed with this apparatus, for the patient was in a very serious condition before the operation.

There is a very instructive series of cases of operations for gall-stones which show the perfection to which this branch of abdominal surgery has been brought. In several of those cases the stones were impacted in the biliary passages and extracted after incision over them, the resulting wound not being closed with sutures as is the usual custom.

We were able to report two cases of operation for obturator hernia. Obturator hernia is one of the rarities of surgical practice, for only thirty operations for this hernia are known to have been performed in Europe up to the date on which these two cases were published in THE LANCET. The first case was that of a woman aged seventy-one years who had suffered from an occasional swelling in the left thigh for some years, with attacks of obstruction of the bowels. The symptoms of strangulation had been in existence for three days when she was admitted and the external operation was performed. A second operation was required for the same variety of hernia on the other side a month later. The patient made a good recovery. An emaciated woman was admitted with intestinal obstruction under the same surgeon whilst the first case was in the wards. Abdominal section was performed, but she did not rally. A hernia was found in the left obturator foramen.

Recovery after total suppression of urine due to calculus is so seldom met with that we give an abstract of the following case. A man aged fifty-six years had suffered from pain in both loins for years. Twelve months before the suppression he had an attack of pain in the right side of unusual severity on the subsidence of which the kidney on that side gave no further trouble. The pain persisted on the left side and

culminated four days before operation in a severe attack, after which no urine was passed. At the operation a conical uric acid stone impacted in the ureter was extracted and the man made a good recovery.

Rupture of the pregnant uterus is fortunately a rare complication of parturition. In one case, apparently as the result of over-exertion for some days, an alcoholic woman died rather suddenly, and the post-mortem examination showed rupture of the posterior part of the uterus and a second rupture into the broad ligament. In another case the posterior vaginal wall was found ruptured before labour had advanced beyond the first stage. Immediate steps were taken to empty the uterus under chloroform, and after the delivery of the child and removal of the placenta appropriate stimulants were administered. It was then possible to suture the lower part of the vaginal rent, the upper part being plugged with gauze. The patient recovered.

A series of plastic operations for deformities of the face is worthy of mention, if only for the ingenuity displayed in the adaptation of the flaps and the novel method of forming an artificial bridge for the nose.

We have not recorded many examples of the removal of large tumours; such are seldom seen at the present day. A case of large molluscum fibrosum is, however, noteworthy, from its association with fibromata in the tissue underlying it and their peculiar arrangement.

The Public Medical Services.

With regard to the naval and military medical services there is little to be chronicled during the past year in respect of the former. A considerable increase to the naval strength of this country has been voted and has, or will be, made. There has happily been no naval war, but the nation, always proud of and greatly interested in its navy, has been reminded by the commemoration of Trafalgar of the great part which her fleet has played in the past and of the essential importance of a strong navy to an insular power like that of this country with all its outlying possessions and dependencies. The changes in the naval medical service have been chiefly in the way of promotions and of the ordinary kind incidental to it. We are glad to say that speaking generally the medical officers of our navy seem to be satisfied with their position.

During 1896 there has been a good deal, on the other hand, to chronicle as regards the army. During the past year the world has been full of wars and rumours of wars, and much has been said of the "isolated position" of this country, but mainly by those who are envious of the position we occupy and of our independence. This country seems, however, to be always engaged in some small war or other or in an expedition of some kind, and it has been so in the year that is passing. The very hard and brilliant Indian expedition to Chitral in 1895 had just terminated, the honors' gazette for which appeared in the first month of this year. We were at the tail end of the Ashanti expedition at the opening of 1896, and the Nile campaign and that in Mashonaland have also taken place. In all these expeditions the military medical services have, it is universally recognised, done their work uncommonly well under very arduous and trying circumstances; and many medical officers have exceptionally distinguished themselves in different directions—in the display of gallantry, devotion, and courage; in exceptional zeal; in forethought, and administrative capacity and professional skill. It has been our pleasing duty to record these services and the list of those whose work has been especially recognised in the way of honours, distinctions, or promotion.

Surgeon-Major-General JAMESON has been made Director-General of the Army Medical Staff in succession to Sir WILLIAM MACKINNON, K.C.B. The new Commander-in-Chief, Lord WOLSELEY, visited and spoke at Netley during the past summer, but did not afford any information as to the nature of the changes that are required to restore the popularity of the medical service. We have so frequently and recently dwelt upon these that there is no need to recapitulate them on the present occasion. An increase of the Army Medical Staff is, we believe, urgently required at the present time, and thirty-five vacancies have been notified as open for competition in February next. The medical profession and its medical schools are meanwhile waiting to hear what are to be the future conditions of the service.

The Indian medical service has as usual done a large amount of excellent work during the past year, and we have every reason to believe that progress is being made in various directions in the medical and sanitary history of that country. The medical history of the year in India has been an eventful one. In addition to the diseases incidental to that climate there has been an outbreak of bubonic fever, or plague, at Bombay and upwards of a thousand deaths have already been attributed to it, while the occurrence of some suspicious cases of a doubtful character in Calcutta are giving rise to much anxiety in that city. At the moment of writing, too, India is threatened with famine, but the late rains have, it is hoped, averted the prospect of the severe famine at one time anticipated. A good deal of discussion has arisen of late in regard to the re-organisation of the medical services in India. We are glad to learn that the five years' tour of Indian service for officers of the Army Medical Staff has been conceded in place of six; and the pay of the junior ranks of that service should, as a matter of justice, be also readjusted at once. The enormous prevalence of venereal disease in the European army in India is a very serious matter calling for prompt consideration.

While it has been our gratifying duty to chronicle deeds and work performed by the medical services and the rewards and promotions which a number of medical officers have earned for themselves, we have also had to perform the melancholy task of narrating the losses which death has made in their ranks, and these have been considerable, especially among the upper and retired ranks of the services. To mention only a few — Inspector-General ANDERSON, C.B., Inspector-General MEIKLEHAM, Surgeon-General EKIN, C.B., Surgeon-General MUNRO, C.B., Surgeon-General HENDLEY, C.B., Surgeon-Major-General MARKEY, C.B., and Inspector-General of Hospitals and Fleets C. M'SHANE have passed away. It has also been our very sad duty to record the premature deaths of several young and promising officers.

Chemistry.

There is not this year the brilliant record of discovery to chronicle in regard to pure chemistry that there was in 1895. That year witnessed, it will be remembered, the discovery of another constituent of the air (argon) which led the way to a not less exciting announcement of the recognition of an element existing upon the earth which had formerly been supposed to exist only in the sun (helion). Since the discovery of these elements was announced the edifice of some of the most important theories in chemistry has been threatened with disturbance. RAMSAY has continued his researches with these bodies with characteristic energy and zeal, and results have been obtained which would seem to promise a closer insight into the constitution of matter and of the nature of the atom. Perhaps the most curious sequel to recent discovery is that of not being able to find a place for the new elements in the classification of MENDELEEFF. It seems probable that in the light of these facts we must modify, as CROOKES has predicted we should have to do, our conception of an element, and further research may very probably lead to startling facts in this direction. Thus, while some chemists regard these bodies as new elements, others have advanced very plausible arguments in favour of argon and helion being allotropic states of nitrogen and hydrogen of a new character. This hypothesis brings us face to face again with CROOKES'S protyle—the analogue of protoplasm in organic life—and the idea suggests itself as to whether these are not formed from one common material in accordance with PROUT'S beautiful hypothesis, which postulates that the atomic weights are different functions of the same elementary stuff. The year 1896 will, however, be ever held memorable in connexion with the discovery by ROENTGEN of those rays which, in the absence of any precise knowledge of their nature, are called conveniently and simply "x." The discovery by ROENTGEN was announced in THE LANCET of Jan. 16th. Within a week of the announcement we were able to satisfy ourselves that the report was correct, and on Jan. 23rd we presented our readers with reproductions of the photographs taken in our presence of a human hand and of a frog showing with fairly excellent detail the bones in each case. The rapid development of the discovery and of its application to medicine are now matters of history which have been made familiar to our readers in the columns of THE LANCET. In a review of the practical work of the year we record in another column some applications of the new photography which were carried out in THE LANCET Laboratory. The nature of the "x" ray is still a mystery. Some think that the phenomenon is due, like light, to the vibrations of the ether or even that it is light with a short wave length. Others consider that these rays are formed of matter charged negatively and travelling with great velocity. Recent experiments, however, have led to observations which do not easily agree with the former theory, but, on the contrary, they are in harmony with the latter theory, which regards them as a material radiation. So that it is probable that in the year 1896, as in the previous year, if the views about the allotropic nature of argon and helion be correct, yet one other new form of matter has been recognised. There is little doubt that materials are now coming abundantly to hand which are calculated to considerably elucidate our ideas of the nature of that mysterious thing we call matter, and the researches of DEWAR, OLSZEWSKI, and others on the excessively low temperatures may be cited as likely to afford assistance of no mean kind in this direction. Chemistry as it is known to us treats simply with the composition of matter within limited conditions of temperature, and it is interesting to reflect what the nature of things must be at the enormously high temperature of the sun on the one hand and at the enormously low temperature which it is possible theoretically to reach on the other. Thus we must consider that air is liquid at low temperatures, that the diamond is gaseous at high temperatures, and that sodium floats about with perfect impunity on liquid oxygen, and these are only a few instances of the interesting and strange modifications which occur in the nature of a few ordinary substances when the physical conditions to which they are subjected are beyond ordinary limits. DEWAR'S researches for the year have been chiefly confined to the elaboration of his first beautiful series of experiments and to studying the effect of low temperatures on physical phenomena, as light and electricity. All research, it is interesting to remark, is tending to show that the breach between chemistry and physics will soon be bridged over for ever, and no sharp line of demarkation separating what have been called the sister sciences can remain. Another fascinating glimpse into the nature of things has been afforded by some pretty experiments by CROOKES on the effect of molecularly bombarding the diamond. On placing some diamonds of a good white colour in a vacuum tube and passing an electric discharge through it he observed that the surfaces of the gems became considerably blackened. Further investigations showed that this was due to the transformation of the diamond into the allotropic variety graphite, for on placing the blackened gems in an oxidising solution the black substance dissolved leaving the faces even more brilliant than before. There was no alteration of the smooth crystalline surface. Here was evidently an allotropic change induced by the bombardment of molecules produced by an electric discharge, so that the experiments afford a fresh instance of a substance undergoing a very marked physical transformation without the slightest chemical change. Speaking of diamonds, it is now well known that these carbon crystals have been produced artificially on a small scale by MOISSAN, and although these researches have not brought about any result of a directly practical importance, yet they have led to the fruitful study of the phenomena exhibited when the highest artificially obtainable temperature by means of the electric arc is attained. By this means the carbides have been produced, some of them, such as calcium carbide, giving, on treatment with water, acetylene—a gas of enormous illuminating power. This method of obtaining an illuminant is rapidly becoming a factor of some importance in modern industries, but from a theoretical point of view there is a greater importance to be attached to these researches, inasmuch as the fact that metallic carbide may be easily prepared at high temperatures may offer some explanation of the formation of liquid or solid hydrocarbons

in the deeper strata of our globe, and of their occurrence at the various oil wells in the world, which have given rise to an industry second in importance to none, especially when we consider that it is possible that our future methods of locomotion may largely depend on the world's yield of hydrocarbon oils. There are several other minor discoveries in chemistry which it is beyond our province to record, but, as will be seen, the work of the year has been directed more to the questions of chemical evolution and to the constitution of matter than to less occult fields. Contributions to our knowledge of the architecture of compounds which must obviously rest on a knowledge of the constitution of the element or the atom itself—the brick of the structure—should interest every true student of science, while they are of direct concern to the student of medicine, since without a knowledge of the constitution or structure of the molecules which go to make up the substances employed as remedies, therapeutics or the administration of these remedies can never be an exact science. Thus the research chemist may contribute, though indirectly, his share towards placing medicine upon a real and scientific basis.

Roentgen Rays.

By far the most important improvement which has been made during 1896 in the whole domain of medicine and surgery is the discovery of the x rays. Many a time has the wish arisen during an attempted diagnosis that we could see into the bodies of our patients, and indeed as long ago as 1868 the late Sir BENJAMIN W. RICHARDSON made attempts to look through the body by ordinary light. He tried various illuminants and the best results were obtained with the magnesium ribbon; he succeeded in seeing fairly clearly the shapes of the bones of hand, but no practical use was made of the invention, and these experiments had been completely forgotten when in the beginning of January of this year the scientific world was startled by hearing that Professor ROENTGEN of Würzburg had discovered a new kind of light which could penetrate wood and the flesh of men and animals. The immense field of applicability in medicine and surgery of this discovery immediately struck everyone, but a very natural incredulity prevailed until it was announced that the experiments had been repeated with success in London. In THE LANCET of Jan. 25th we published two skiagraphs (as they are now called), one of a part of a hand, and the other of the lower limbs of a frog. These were among the earliest which were published in London. The nature of the light has not yet been settled; the two suggestions that have received the most support are, first, that the rays are longitudinal vibrations of ether while the ordinary light is due to transverse vibrations; and, secondly, that they are rays beyond the compass of the visible spectrum. Whatever may be their nature their production is a simple matter. The poles of a powerful induction coil are connected with the terminals of a Crookes's tube, which is a highly exhausted glass bulb containing two electrodes, and the rays are developed during the discharge between the terminals. We are not yet clear as to what are the conditions which determine the permeability of a substance by the x rays; but it may be said fairly definitely that the permeability varies inversely as the specific gravity—that is to say, that the greater the specific gravity the less permeable is the substance. Thus, aluminium allows the rays to pass freely, but the heavier metals, such as iron and lead, are quite opaque to them. Glass is impervious to the rays, and in a photograph a piece of glass embedded in the tissues gives a clear and distinct shadow. A decided advance was made when Professor SALVINI of Perugia devised a method by which the shadows formed by opaque objects could be seen. Professor ROENTGEN himself had shown that the x rays caused various salts to become incandescent. SALVINI applied this fact by spreading crystals of one of these salts on a screen and then put the screen on the side of the body opposite to the source of the rays. The salts which have been chiefly employed are the platinocyanides of barium and of potassium and calcium tungstate; of these the first named is probably the best. THE LANCET at an early date set up the apparatus for the production of the rays, and many photographs taken by its means were published; among these may be mentioned one of the trunk of a monkey in one of the kidneys of which had been placed a uric acid calculus; the shadow cast by the stone was well defined.

As the thickness of the tissues increases the difficulty of obtaining clear photographs increases also, but very satisfactory results have been obtained in attempts to photograph through the whole human body. If the Crookes's tube is placed anteriorly, the vertebræ are well defined, and the sternum is hardly to be recognised, but if the light is placed behind the reverse is the case. In photographs of the chest the heart can be seen as an opaque mass darker in the centre. By the use of the incandescent screen the movements of the heart may be witnessed. The lungs cast no shadow. The liver and diaphragm can be easily distinguished. This is a bald statement of the present position of ROENTGEN'S discovery as an adjuvant to medical diagnosis. As more experiments are made and as the apparatus is brought, as it will be, to greater perfection, we shall expect more delicate results. We have already been able to report a case where a suspicion of aortic aneurysm was confirmed by the peculiar outline of the cardiac shadow.

It is interesting to note that bone does not appear to be equally opaque in all experiments. Generally the bones appear as dark structures, with well-defined outlines, and gaps are seen at the joints which correspond to the transparent cartilages; but in other cases the bones seem to transmit no small amount of light, and then they appear as faint shadows. It is possible that all the x rays are not of the same nature, and at some time in the future we may be able to use at will the rays most suitable for a particular case.

We possess no power of refracting the x rays so that we are utterly unable to obtain anything of the nature of a "true image," the results are nothing more than photographic prints of shadows. It is not unreasonable to hope that before long this difficulty may be overcome. If it is wished to define the depth of any substance casting a shadow it is necessary to make two observations or take two photographs from different points of view.

As to the utility of the discovery there can be no doubt. Foreign bodies, if metallic or mineral in nature, can be readily observed, especially when situated in the extremities;

and it has become almost a routine practice to employ the method to locate needles and bullets before operating. The ease with which such bodies may now be found is a great contrast to the difficulty which every surgeon must have experienced formerly. The method has also been used to determine the situation of a "Murphy's button," which had not come away. Another great application of the discovery is to injuries of the bones and joints; fractures and dislocations can be observed with ease, and the displacement of the bones recognised. In many cases of course it is not necessary to use x rays, but many doubtful cases in which swelling has obscured the lesion are at once cleared up by their use, and when a fracture has been reduced and the limb put up in splints, the parts can be observed through the splints, so that the surgeon can be satisfied that the bones are in position. Growths in bones, erosion of bones, and new formations on bones are readily recognised. Deformities, also, as in talipes, can be clearly seen. Renal and vesical calculi *in situ* have in a few instances been diagnosed, and biliary calculi have also been seen; though these latter offer but little resistance to the passage of the rays. In medicine the method is at present of less value, but dilatation of the right side of the heart can be recognised; atheroma of the aorta and aneurysms of the same vessel have also been obvious in photographs.

Lastly, it may be mentioned that in a few cases unpleasant results have followed the use of the x rays. In one case baldness is said to have occurred, but the lesion most frequently noticed is an affection of the skin; in mild cases this has been nothing more than a "sunburn," but in one or two instances an extensive and troublesome dermatitis has resulted. During the year numerous photographs of the application of the Roentgen rays to surgery have been published in the columns of THE LANCET, illustrating the various points that we have touched upon.

Public Health.

1896 has been on the whole a healthy year. In each of the three quarters for which the Registrar-General has issued reports the general death-rate has been below the average, and certain diseases, such as "fever," diarrhœa, &c., which are deemed to be true tests of healthiness, such as can be secured as the result of improved sanitary administration, have been less fatal than was the case as regards the mean of a long group of preceding years. On the other hand, certain diseases which ought to be kept under control have been in excess. This has been the case as regards small-pox. The city of Gloucester suffered exceptionally from this disease and received a terrible lesson as to the consequences of the failure to vaccinate its infantile population. Whilst the fear of death lasted, the influence of this lesson was potent for good, and it transformed the town from one of the worst vaccinated places in this country to one of the best vaccinated. But the moment that immunity by vaccination was secured, with consequent sudden abatement of the epidemic, the anti-vaccination agitation was renewed, and persons who at one moment hurriedly sought its protection for themselves and their families are now again either apathetic or in actual opposition to the practice. Amongst other places attacked were Bristol, Aston Manor, High Wycombe, West Ham, and cases occurred in Monmouthshire, in South Wales, and in London. In this connexion we may recall the fact that the Royal Commission on Vaccination reported in August last the results of their sittings, which had extended over nearly seven years. We have dealt with that report in detail; and we need here say no more than that the proof of the value of vaccination as a preventive of small-pox was never more strongly put forward than it has been in that document. If the administrative courage of the Commissioners had equalled their power of exposition and of argument in favour of vaccination and re-vaccination it would have been better for the public.

Another disease which has been unusually fatal is measles, and it seems almost impracticable under existing circumstances to control this malady, which causes some 12,000 deaths a year in England and Wales. The infectiousness of the disease in its earliest stages, the rapidity of its spread through school agency, the extreme youth of many of the sufferers, and the utter carelessness of many parents in regard to it, frustrate nearly every effort to prevent its diffusion. Many authorities have temporarily added it to the list of notifiable diseases, but only a small proportion of them retain it after the lapse of four or five years. Diphtheria, too, shows no material sign of diminution. In London alone the deaths during the period September–November were very numerous, often amounting to between sixty and seventy per week; and notwithstanding all efforts to prove the contrary there can be no doubt that the tenacity with which the infection clings to the school-going ages must be in large measure due to that which has been termed "school influence." Diarrhœa was, happily, not a very fatal disease taking the year as a whole; but during six weeks of the months of July and August, when there was absence of rain and excess of temperature, the fatality increased in certain of our large towns and cities, and in the metropolis it was by some persons assumed to have been exceptionally prevalent in districts where the water-supply was for a time materially diminished in amount. The contention was, however, not borne out; the disease was of much the same extent in localities of a similar character where there was no lack of water, and it had been of even greater extent under very similar meteorological conditions, when no question of water-supply could be raised. Such scarcity of water as did prevail was not of sufficient duration to show itself in death-returns.

Following on the report which was made in 1895 by the first Royal Commission on Tuberculosis, a second one was appointed during the last Session of Parliament, with a view of ascertaining what administrative procedures are necessary and desirable with a view to such control of food-supplies as shall prevent them from serving as a means of conveying tuberculosis in its different forms to the human subject. The principal questions involve our meat and our milk supplies, and in this way the interests of the butcher, the agriculturist, and the dairy farmer will have to be considered as well as those of the public health. The Commission has commenced its sittings, and it is assumed that it will report during the forthcoming Session of Parliament.

There has been but little legislation during the past year that has had direct concern with public health. But in one respect the limited action taken has been extremely satisfactory by reason of the fact that it has once for all removed

from the Statute Book of Great Britain and Ireland all reference to the antiquated system of quarantine. That practice had for years past been maintained "in dummy" because it was deemed necessary in the interests of our commercial relations with certain States in South America; but for the future yellow fever and plague, if they reach our shores, will be dealt with on the same lines as those hitherto adopted with success in the case of cholera, and no healthy people will be detained at our ports merely because an official chooses to assume that they may possibly be incubating a disease. The new regulations issued by the Local Government Board as to cholera, yellow fever, and plague came into operation on Nov. 9th, 1896.

In the medical department of the Local Government Board the only change that has taken place has been caused by the death of Mr. T. W. THOMPSON, an able and cultured etiologist and writer, and his replacement on the permanent staff by Dr. SAMUEL WHEATON. One of the temporary medical inspectors appointed during the European prevalence of cholera is still retained. So far as danger from Europe is concerned no special action seems now necessary; but cholera has again been widely prevalent in Egypt, and it is impossible to say whether we may not experience a recrudescence of the disease next year. Between mid-October, 1895, and the close of 1896 the deaths from cholera in Egypt reached nearly 16,000; and though there is again an apparent disappearance of the disease this may be as fallacious as it was towards the close of 1895.

Port sanitary administration will therefore have to remain active, for cholera made considerable ravages in England in 1866, when it was imported from Egypt. How far there may be danger of plague on account of our constant relations by sea with Bombay remains to be seen. There seems, however, but little doubt that in September last two cases of bubonic plague were detected amongst native crews arriving from Indian Ports; and it is satisfactory to note that with ordinary precautions as to disinfective and isolation of the sick, we seem to have a precedent to show that this malady can be dealt with by air current measures of disease-prevention. But, mild cases are extremely obscure, and whilst we retain black spots on our coast line and inlsnd, it will be necessary for all health officers to be on the alert as to any febrile attack associated with glandular enlargements of a bubonic character. Nothing new has been heard as to the Paris Convention. we always regretted the retrograde character of the proposals as to the Persian Gulf; and avoiding as they did of antiguated quarantine, and we can only assume that the protest of mid delegates as to this and as to a few other matters has prevented, for the present, ratification of the convention.

Amongst other reports issued during the year by the Medical Department of the Local Government Board, that which deals with Oyster Culture in relation to Disease has attracted most attention. It has revealed two things—firstly, that oysters are in certain places cultivated and stored under conditions of sewage pollution, both in this country and in others, which should lead to their being discarded as a human food-supply; and, secondly, that some of our choicest oysters are laid and stored on our shores under conditions which are altogether free from risk. It is to be hoped that those concerned in the oyster trade will do away with the evils which now exist and so restore confidence without the necessity of intervention on the part of the State. Indeed, we are glad to learn that already action is being taken in this direction by a number of the more intelligent of those concerned in the oyster fisheries, and that, as the result, some of the storage pits which came under condemnation have actually been abandoned.

The General Medical Council.

The General Medical Council has had a somewhat busy year. The summer meeting began on June 2nd and ended on June 9th. The principal topics of discussion at this meeting were the duty of the Council towards the Apothecaries' Hall of Dublin touching the application for examiners in surgery and even in medicine, if that were judged necessary by the Council; and the enormous increase in the number of medical examinations and in the re ections of candidates. With regard to the first subject, the Council was in a somewhat delicate position, the Privy Council having suggested to the Apothecaries' Hall a second application, the first one having been refused. Sir WILLIAM TURNER, seeing the indisposition of the Council to accede to the second application, proposed as a *via media* a representation to the Royal College of Surgeons in Ireland and the Apothecaries' Hall in favour of their re-considering their respective positions, with a view to another combination between them that should ensure a board of examiners that would be satisfactory to the General Medical Council. This proposal was carried. Mr. TEALE'S demonstration of the increased number of examinations and rejections was at first received rather as an academic exercise than as laying a serious duty on the Council, but in the end was referred to the Examination Committee. The penal cases at the summer meeting were of a serious character. In three instances the accused practitioners were found guilty of "infamous conduct," and their names were ordered to be removed from the Register.

At the summer meeting an important statement was made by Mr. MUIR MACKENZIE, legal adviser to the Council, as to the desirableness of the Council submitting to Parliament a Bill for the amendment of the Penal Clauses of the Medical Act. Mr. MACKENZIE thought that such a step would be at least premature, likely to lead to considerable discussion in Parliament, and possibly to weaken some extremely beneficial provisions of the Medical Acts. He did not allow that the difficulties of getting a conviction under Clause 40 were such as to make further legislation necessary. But he had to assume that magistrates were very competent, and the evidence very complete and well prepared. Any amendment, he thought, should be considered with reference to larger questions, and to including a larger number of false assumptions of title than are at present included in Clause 40.

At this meeting, also, a very instructive and suggestive report from the Executive Committee was made on the Discip linary or Penal powers of the Qualifying Medical Authorities, showing how defective these powers are in the universities, especially those of Scotland. Copies of the report were forwarded to the bodies concerned, and the subject is still being considered by the Executive Committee. The much-

needed extension of practical instruction in midwifery pressed so long by Dr. GLOVER, was partially attained by a resolution of the Council. A motion by Mr. BRYANT should be noticed, raising the question of the sufficiency as a preliminary test of the examination for a second-class certificate (of first or second division) of the College of Preceptors.

The autumn meeting of the Council is fresh in the recollection of our readers. The subject of the Apothecaries' Hall of Dublin was again before the Council. Sir WILLIAM TURNER'S suggestion for a reconsideration of the subject by the Royal College of Surgeons in Ireland and the Hall had not been favourably entertained by that College, and the Hall petitioned the Council again for the appointment of fresh examiners. A motion to this effect, moved by Mr. TICHBORNE, was seconded by Sir JOHN BANKS. But the Council by a large majority refused to accede to the petition and directed the President to communicate the decision to the Lord President of the Privy Council.

The report of the Examination Committee on Mr. TEALE'S motion respecting excessive examinations and rejections was sent back to the Executive Committee, with special reference to the question of utilising examinations at the medical schools. Perhaps the most important business of the meeting was the exposure in several cases of a wholesale system of using unqualified assistants in the north of England and in Wales and of the reception by local registrars of irregular certificates of death from them. On this subject the Council determined to make representations to the Registrar-General and to seek an interview with the President of the Local Government Board. The Education Committee, reporting on Mr. BRYANT'S resolution as to the sufficiency as a preliminary test of the examination, for a second-class certificate (of first or second division) of the College of Preceptors, advised that it would scarcely be fair to deal with any one examination in only one division of the kingdom. The Council accepted the report and passed a resolution desiring the gradual increase of the stringency of all junior examinations in general education. By another resolution the Council instructed the Education Committee to consider the requirements of these examinations and to report on the steps needed for enforcing a higher and more uniform standard. The consensus of opinion in favour of this movement is one of most favourable import for the medical profession of the future.

The retirement of Mr. WHEELHOUSE and Sir WALTER FOSTER was the subject of very general regret and of a very complimentary motion by Mr. BRUDENELL CARTER on the last day of the Session. Since the meeting the election of Direct Representatives has resulted in the choice of Dr. RENTOUL of Liverpool, Mr. GEORGE BROWN of London, and Dr. GLOVER of London, who has thus been elected for the third time.

Election of Direct Representatives.

The serenity of the profession has been slightly disturbed by the election of three Direct Representatives of the registered practitioners of England on the General Medical Council occasioned by the expiration of the term of office of Dr. GLOVER, Mr. WHEELHOUSE, and Sir WALTER FOSTER, who in two successive quinquennial periods have held these honourable posts. In June Mr. WHEELHOUSE and Sir WALTER FOSTER, for reasons which have never been fully understood, intimated their intention of resigning, to the regret of their colleagues and of a large body of the profession. Dr. GLOVER remained at his post—or, rather, offered himself for re-election. Our readers know what followed. One candidate after another came forward till there were ten for the three vacant seats. Questions of medical education or registration—which are the principal cares of the General Medical Council—were scarcely mentioned. The question on which above all others the election seemed to turn was the attitude of candidates towards "The Midwives Bill." The contest is too recent to make it necessary for us to dwell upon it. In the end Dr. RENTOUL, Mr. GEORGE BROWN, and Dr. GLOVER were returned in the order on the poll in which we have given their names. In Scotland the retiring member, Dr. BRUCE, was opposed by Dr. D. CAMPBELL BLACK, but was re-elected by a majority of 700 votes. In Ireland, it will be remembered, Mr. THOMSON was elected earlier in the year in succession to the late and lamented Dr. KIDD.

The British Medical Association.

The Association held its sixty-fourth annual meeting at Carlisle. The meeting began on Tuesday, July 26th, under the presidency of Dr. HENRY BARNES, J.P. physician to the Cumberland Infirmary. Dr. BARNES'S presidential address included a short history of Carlisle and the neighbourhood, with special reference to medical points, but the most valuable part of it had reference to the work of medical worthies of Cumberland. The address in medicine was delivered by Sir DYCE DUCKWORTH, and dealt with the Prognosis of Disease; that in surgery by Dr. RODERICK MACLAREN, senior surgeon to the Cumberland Infirmary, who took for his subject Preventive Surgery. Our columns will testify to the variety and richness of the work of the various sections, from which it is difficult without being invidious to select illustrations. A very pleasing incident in the proceedings was the presentation to Surgeon-Captain WHITCHURCH, V.C., of Chitral fame, of the gold medal of the Association. The prominence of the Ethical discussions was worthy of special notice, although the tone and spirit of some of the speeches were occasionally such as to suggest adverse criticism. The number attending the meeting was about 700, and was enough to strain the resources of the hotels of Carlisle though not the hospitality of its citizens.

The Metropolitan Hospital Sunday Fund.

The Hospital Sunday Fund amounted this year to £46,035 3*s.*, including Sir SAVILLE CROSSLEY'S sixth donation of £1000, and legacies to the amount of £672 9*s.* 4*d.* This falls short of the historical collection of 1895, which was supplemented by kind gifts from the unusual profits of fortunate men, such as cannot be expected every year. But the sum is larger, with this exception, than in any previous year. The Council was invited in the course of the year to express an opinion on the subject of the abuse of the out-patient department of hospitals. The subject is still under the consideration of the Distribution Committee, to which it was referred. It is certainly well within the province of the Council of the Hospital Sunday Fund to express an opinion on a question of this sort.

The Benevolent Agencies of the Profession.

The four benevolent agencies of the profession fall far short of the actual necessities of the profession, so that it is not surprising that their resources have been strained to the utmost. It is to be regretted that in the London postal district many widows and orphans of medical men suffer from the failure of the husband in his lifetime to join that admirable society—the Society for Relief of Widows and Orphans of Medical Men—which distributes quarterly cheques to the amount of over £1000, often representing very small payments in the way of premium. At the April meeting the death of a widow was reported who since 1860 had received £1798, her late husband having only contributed 36 guineas. The funded property of this society was increased by £500, being now over £95,000. The British Medical Benevolent Fund has a larger purpose: first, to help immediately members of the profession in need, their widows and orphans; and secondly, to grant annuities to such after sixty years of age. The retirement of such high officers of this society as its trustees—Sir JAMES PAGET, Sir EDWARD SIEVEKING, and Sir HENRY ACLAND—after years of great personal interest and trouble in its operation cannot be passed without a word of gratitude in the name of the profession. Sir WILLIAM BROADBENT, Mr. JOHN MORGAN, and Dr. SAMUEL WEST have been happily chosen to succeed them. In the annual report of this society we are told that the number of applicants for grants was 212, of whom only 158 could be relieved. The significance of this balance of 54 unrelieved may well appeal to our Christmas feelings. The balance would have been greater but for a special appeal at the end of the year (1895) by the treasurer through the medical journals. We can testify to the efficacy of this society in the promptness and substance of the relief it affords. In the annuitants' department the committee are able to report the addition of 18 in the year. The third great benevolent agency of our profession—the Epsom College—is enlarging its accommodation for the boys and its provision to enable the council to admit a certain number of boys other than the sons of medical men on paying terms, which it is rightly thought will be to the advantage of the schools. The council has issued an urgent appeal for more annual subscriptions and donations, which must be forthcoming for the cost of maintaining 50 Foundation Scholars free of charge and 50 Pensioners, for which the present subscriptions and donations are inadequate. The annual report of THE LANCET Relief Fund will be given, as usual, in our next number.

The Royal College of Physicians of London.

Amongst the losses sustained by the College by the hand of death during the past year the first naturally to be mentioned is that of Sir JOHN RUSSELL REYNOLDS, whose culture and grace had adorned the Presidential chair. He died a few weeks after his annual term of office had expired, having refused to submit his name for re-election. Sir GEORGE JOHNSON, Dr. LANGDON DOWN, Dr. G. HARLEY, and Sir B. W. RICHARDSON have also passed away. The choice of the Fellows for the office of President fell upon Dr. S. KS by a large majority of votes, and shortly afterwards he received a vote of congratulation upon his appointment as one of the Physicians-in-Ordinary to Her Majesty the QUEEN. The College has taken two steps with regard to its examinations which cannot fail to have some influence upon the medical curriculum. The one was the resolution arrived at in a special Comitia last February to expunge pharmacology from the list of subjects for the final examination. The step was taken almost at the eleventh hour, as the time was approaching when the scheme originally laid down to suit the new five years' curriculum would have come into practical effect. The other was the acceptance, after a debate adjourned to a second meeting, of a proposal by Dr. PAVY to consider to what extent the subject of bacteriology should be admitted into the examinations. The occasion of the completion and publication of the "Nomenclature of Diseases" was marked by the bestowal of a well-earned vote of thanks and honorarium upon Dr. J. F. PAYNE, the editor of the volume. The gift by Captain WILLIAMS of the sum of £1000 to establish a memorial of the late Dr. BISSETT HAWKINS has enabled the College to adopt a scheme for the foundation of a Triennial Medal in recognition of work done in sanitary science. The Harveian Orator this year was Dr. J. F. PAYNE. The Bradshaw Lecture was given by Dr. GOWERS, who took for his subject the Subjective Sensations of Sound. Dr. E. C. SEATON delivered the Milroy Lectures upon Isolation and its Difficulties; Dr. P. MANSON the Gulstonian Lectures upon the Life History of the Malaria Parasite; Sir DYCE DUCKWORTH the Lumleian Lectures on the Sequels of Diseases; and Dr. G. OLIVER the Croonian Lectures on the Study of the Blood and Circulation.

The Royal College of Surgeons of England.

The most important matter in connexion with the Royal College of Surgeons of England during the present year has been the continuation of the struggle of the Members for direct representation on the Council. At the end of 1895 a committee appointed by the Council to receive deputations from the Members and from the Fellows on the subject of the representation of Members had not handed in any report, as it was considered advisable to wait until the Fellows had deliberated and voted on the resolution passed at the meeting of Fellows and Members in November, 1895. This resolution was as follows:—

"That this meeting requests the Council to take steps to obtain an amended charter which shall contain the following provisions: (*a*) that no alteration in the constitution and external relations of the College shall be effected without the consent of the body corporate convened to discuss such alterations; (*b*) that the present annual general meeting be made statutory, and that the report of the Council shall be submitted for formal adoption; (*c*) that the number of the Council be increased to thirty-two, and that eight of these, who may be Members, shall be elected by the Members only, provided always that no Member who has not been a Member for twenty years shall be eligible for a seat on the Council."

At the January meeting of the Fellows, though this resolution was not accepted, an amendment was carried by a large majority to the effect "that it is desirable to give to the Members of the College direct representation on the Council." Any reference to the mode of representation, whether by Fellows or by Members, or to the number

of representatives was carefully excluded from the resolution. When this resolution came before the Council at its January meeting it was referred to the Deputation Committee to consider in connexion with the subjects already submitted to them. At their next meeting the report from this committee was received, and it was moved that a poll of the Fellows should be taken on the question, but an amendment to this was carried: "That before the Fellows are addressed upon the subject the Council do take into consideration at an early meeting the question whether Members should or should not be directly represented on the Council." At the meeting in March the subject was further discussed, and ultimately the following resolution was carried by 11 votes to 8, two members of the Council abstaining from voting and three of reforming tendencies being absent. It was "that, as the members of this Council represent the body corporate of this Royal College and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable." This is obviously a mere quibble on the word "represent" and is unworthy of a body of educated Englishmen. At the meeting of the Council in May Mr. TWEEDY moved and Mr. RIVINGTON seconded "That a poll of the Fellows be taken respecting the motion passed at a general meeting of Fellows on the 2nd of January in favour of giving to the Members of the College direct representation on the Council, and that a committee be appointed to prepare for the approval of the Council an elucidatory statement of the subject in question, together with the interrogatories which shall be submitted to the Fellows." The resolution was carried, and a committee was appointed. Mr. RIVINGTON then moved that the resolution carried at the March meeting should be rescinded, but the motion was lost. A report was received from the Deputation Committee at the June meeting, which recommended that the deputations of Fellows and of Members be informed that, as the Council had determined to take a poll of the Fellows on the question of the representation of the Members on the Council, it was inexpedient to consider any other points involving alterations in the Charter of the College. A letter appeared shortly after this in the journals from Dr. JAMES HARDIE of Manchester, a member of the Council, in which he urged that it was very undesirable to grant any representation to the Members, as thereby the value of the Fellowship would be lowered; he seemed to suggest that men obtained the Fellowship in order to be able to vote at the election of members of the Council. The letter was of no great importance in itself, but it was extensively circulated later, in October, among the Fellows by the Association of Fellows of Manchester in order to influence the answers of Fellows to the interrogatories. No steps in advance were taken at the July meeting of the Fellows, the President merely briefly describing what had already occurred. The circular to the Fellows was issued on Oct. 1st; in it each Fellow was asked if he considered any direct representation of the Members on the Council desirable, and if so, how many representatives should there be. He was further requested to say, if he considered that the Members should be represented by Fellows or by Members, and also if a Member should be capable of voting immediately after obtaining the Membership or only after some period had elapsed. An explanatory statement was sent with the questions, and in a fairly impartial manner it set out the circumstances which had led up to the issuing of the circular. It commenced with an account of the effects of the Charter of 1843, under which the order of Fellows was created, and quoted the arguments advanced by the Society of Members in favour of direct representation with more or less cogent replies to each. We understand that it is intended to keep the poll open until Jan. 31st, 1897, so that answers may be received from the colonies and abroad. At the annual meeting in November of Fellows and Members a resolution was carried to the effect "that this meeting while thanking the Council for taking a poll of the Fellows on the question of the representation of Members, dissents from, and regrets, the resolution passed by the Council on March 12th, 1896." The whole matter is now waiting for the result of the poll of the Fellows to be known.

Another subject that has often come before the meetings at the College of Surgeons, is the case of Mr. R. B. ANDERSON, F.R.C.S. The persecution to which Mr. ANDERSON has been subjected is so well known that it is unnecessary to go into any details, but at the present moment Mr. ANDERSON is appealing to the House of Lords and to the Privy Council for the reversal of the judgments which have been given against him. For these appeals funds are necessary, and though the Council of the College had shown its sympathy with Mr. ANDERSON by appointing two of its members as representatives on the Civil Rights Defence Committee and also, in response to a resolution carried at the July meeting of Fellows, had instructed the representative of the College on the General Medical Council to forward in every way which seemed feasible the objects of the Civil Rights Defence Committee, yet more substantial support was needed; and at the annual meeting in November Mr. T. HOLMES moved "that this meeting trusts that the Council may see fit to contribute a substantial sum from the funds of the College towards the defence of the rights of Mr. R. B. ANDERSON, these being the common rights of the Fellows, which the College, under By-law xv., has undertaken to defend." After prolonged discussion the motion was carried; but the Council at its next meeting re-affirmed a resolution which had been passed in August—that, while sympathising with Mr. ANDERSON, the Council did not feel justified in devoting any of the funds of the College towards the promotion of his appeal.

The Fellows at their January meeting by 45 votes to 10, expressed the opinion that women should be admitted to the diplomas of the College, but nothing further has been done.

The Regulations for the Diploma in Dental Surgery have been revised, and the Examinations re-arranged. A Memorial was presented by Dr. J. S. EDKINS, from many of the Professors of, and Lecturers on, Physiology in the United Kingdom, suggesting alterations in the Examination in Physiology for the Fellowship, but the Council declined to open the question.

At the election for members of Council in July Mr. T. BRYANT and Mr. PICKERING PICK were re-elected and Mr. DAVIES COLLEY was elected. Mr. BRYANT had already had two terms of office and Mr. PICKERING PICK one term of eight years. Sir WILLIAM MACCORMAC was elected President in July. For the last three months of the year he has been suffering from pneumonia followed by empyema, but we are happy to say he is now steadily recovering. Mr. N. C. MACNAMARA and Mr. J. LANGTON were appointed vice-presidents.

The Jacksonian prize was awarded to Dr. A. A KANTHACK for his paper on Tetanus and the first award of the Walker prize for work on the subject of Cancer was made, Mr. HAROLD JALLAND STILES, F.R.C.S. Edin., being the recipient. The museum has received several noticeable additions. Among others we may mention a fine skeleton of the extinct New Zealand bird, the moa; but as the specimen is made up of bones belonging to different skeletons and some bones are merely represented by plaster it is obviously not entitled to the eulogiums which have been showered on it.

Analytical and other Commissions, &c.

Practical inquiry has formed a marked feature of the work of THE LANCET during the past year, and the results have been published in the reports of Commissions, and in special articles in which much of the work has been based upon investigations carried out in THE LANCET Laboratory. The first inquiry related to the Dangers of Paraffin Lamps and was instituted in view of the increasing number of disasters arising from this cause. The investigation was of a practical nature and was directed chiefly to cheap lamps and those used by the poor. It is a noteworthy fact that lamp accidents occur in by far the majority of cases in the houses of the poor. Cheap lamps, therefore, of varying patterns and kinds were purchased in most of the poorer districts in London, and a picture of the lamps, subsequently secured for the purpose of the inquiry, appeared in the report of the "THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps" in THE LANCET of Jan. 4th. The experiments were conducted on such lines as to imitate as closely as possible the conditions under which lamp accidents are likely to occur. The results were extremely instructive and fully justified the alarm that the frequent occurrence of disaster had occasioned. Our Commissioners concluded that at least, and probably more than, 70 per cent. of the lamps sold in London would be extremely liable to add fresh disasters to an already formidable list. The danger could be traced in the opinion of our Commissioners to very defective construction on account of which oil could when the lamp was upset freely escape in very serious quantities and become ignited. The investigation did not lead to any observation upon which an explosion could be regarded as the probable and common cause of accident. In not a single case could an explosion be produced. It was therefore urged that improved construction of the lamp would largely, if not entirely, obviate the dangers of paraffin lamps, and the report concluded by calling for immediate legislation with a view to exercise some control over the construction of lamps sold in this country. This inquiry created considerable public interest, and in the main general concurrence with the views arrived at by our Commission was expressed. We await now with considerable interest the report of the Petroleum Committee whose labours will shortly re-commence and whose conclusions we hope will soon be forthcoming.

The next report was that of a Special Sanitary Commission on Disinfection, the results being published in THE LANCET of Jan. 9th. The subject of inquiry was a new steam disinfector designed by the medical officer of health of the county of Essex. The apparatus, which was found to be exceedingly simple in construction and economical in working, was very thoroughly tested from all the points of view of efficiency that are deemed requisite in such an appliance. A large number of bacteriological experiments were instituted which established its sterilising efficiency, while it was further shown that the process was absolutely without injurious action on clothing and bedding appliances.

The next enquiry related to a new hygienic stove in which the principle of regeneration had been applied. The experiments established a remarkably high efficiency of heating power, while at the same time the results showed that the stove was without prejudice to health.

The last enquiry involving operations in the Laboratory was that published in THE LANCET of Dec. 5th, in which appeared the second report of THE LANCET Special Analytical Commission on Natural Mineral Waters. The subject of inquiry was this time a well-known natural bitter water, Hunyadi Janos. One of our commissioners had an opportunity during the year of visiting the springs at Budapest, where he made also an inspection of the processes of collection and bottling adopted there. The report contained complete analyses of samples obtained on the spot and samples obtained by purchase in London. The results established the *bonâ fide* natural character of the water as one derived from a natural source, while the analyses established the exact ratio to one another of the active saline constituents, and also the remarkable constancy of composition which the water had exhibited over a period of thirty years, matters of obvious importance from the point of view of therapeutics.

Soon after the announcement of the discovery of the x rays by ROENTGEN in January we spared no trouble to have appliances at hand necessary for taking photographs in THE LANCET Laboratory, and in THE LANCET of May 7th we invited those of our readers who were interested to see the apparatus at work, while we expressed our willingness to undertake the photography of a few cases that promised to be instructive from a medical standpoint. This invitation was accepted by a large number of medical men. In the meantime the new method had been investigated with a view to placing the results of its developments for medical purposes before our readers. In THE LANCET of March 28th we published as a supplement a plate showing the "new photograph" of a dead monkey in which, we believe for the first time, the soft tissues, in addition to the bones, were plainly shown. The outline of the kidney was especially distinct, and, in addition, it was shown that the demonstration of the presence of a uric acid calculus in the kidney was possible. Since then the method has

proceeded apace, and perhaps the best work in this direction and from a medical point of view has been achieved by Dr. MACINTYRE, whose experiences have been recorded from time to time in our columns. He demonstrated the utility of the new photography by showing a coin impacted in the gullet, while he also produced photographs giving distinct shadows of the viscera, heart, &c. A further development, as is now well known, was reached in making the shadows visible so that they could be directly seen by means of the fluorescent screen. One of the best fluorescent screens for this purpose was shown at work at a demonstration at THE LANCET Offices in June, an account of which appeared in THE LANCET of July 4th. We have continued to publish from time to time articles recording the progress of this new and remarkable aid to surgery.

Lastly, under the column of Analytical Records from THE LANCET Laboratory no less than 100 samples of food and drugs were analysed and reported upon, the analyses involved numbering 250, while in special articles and commissions the number of experiments made was 316, bringing the total up to 566. Thus it is evident that the activity of this important department has in no wise abated, and in the strong belief that the work which it publishes is of interest to our readers our endeavour will be to still further increase its sphere of usefulness and activity.

Such was the special laboratory work of the year. We now turn to other Commissions. A Commission was instituted in March to inquire into the working of Lord ROWTON'S new common lodging-house in King's-cross-road. This was a sequel to a previous Commission held in the spring of 1893. The administration of the new Rowton House, the character of the shelter offered to the lodgers by day and night, and the supplementary accommodation for cooking, &c., were described with the assistance of illustrations, and the general conclusion was arrived at that Lord ROWTON has been able to accomplish the difficult feat of making real philanthropy pay its way. There can be no doubt of the great benefit offered to a certain class by these lodging-houses, and the company which manages them pays a dividend of 4 per cent.

The report of THE LANCET Special Commission, which appeared in July, on the Relative Strength of Diphtheria Antitoxic Serums dealt with a very important subject. The tables and details of the separate investigations were, of course, of a highly technical nature and not, perhaps, of great interest to the medical profession at large. But the conclusions to which these investigations pointed were of extreme interest. There is no doubt that on the Continent the results obtained by the antitoxic serum treatment have lowered the death-rate from diphtheria and that the advantages of the new treatment are now fully recognised. Before we can get on a level with the Continent a common standard of estimating the strength of antitoxic serum must be agreed upon by British manufacturers. THE LANCET Commissioners recommended further that no serum should ever be sent out containing less than sixty normal antitoxin units per c.c., but that higher strengths should also be provided and that every sample should be marked with its antitoxic strength.

A Commission reported in our columns on Aug. 29th on the Balneological and Gymnastic Treatment of Heart Disease at Nauheim. The conclusions arrived at were necessarily a little vague, as it was desired to avoid physiological speculation and rather to give a topical investigation upon which speculation could be based. That Nauheim possesses geographical features favourable to the treatment of certain forms of heart disease is undeniable; while it is also certain that the carefully regulated and supervised "Widerstandsgymnastik" or resisted movements form a powerful means of influencing the heart's action.

From the purely sanitary point of view perhaps the most important work of THE LANCET during the past year was that of the Special Commission to inquire into the Relative Efficiency and Cost of Plumbers' Work. This was the outcome of labour extending over nearly two years, and it had its origin in the feeling we have long expressed that there existed considerable defects in regard to the sanitary arrangements of many houses that could be repaired if the medical profession and the public had the necessary information. The report appeared in THE LANCET of July 4th. The Worshipful Company of Plumbers, in dealing with this report, said "that taken as a whole it may be regarded as a unique work on the subject of the efficiency and cost of plumbing work, and is calculated, if studied attentively to assist members of the medical profession, sanitary authorities, and others in arriving at a more correct judgment than commonly prevails, as to the chief causes of the defective and insanitary plumbers work, and to afford them some useful information as to cost of plumbing work which is sound in construction and sanitary in character." The report was very fully illustrated, and we believe it is doing an important public service. For the benefit of those connected with sanitary matters it was subsequently issued in the form of a reprint.

The Battle of the Clubs.

The series of papers on "The Battle of the Clubs," commenced in our columns in 1895, was continued throughout the first half of the present year. At the commencement of the year our Special Commissioner had reached Birmingham. Here he was able to describe how private individuals — laymen — had organised medical relief on a commercial basis, and how the medical men in their employ had become mere "wage slaves." These medical men have to please their masters rather than their patients. They are no longer the guardians of public health, but the promoters of a private business. From this large centre our Commissioner proceeded to a small rural and mining district, where he showed how utterly the local practitioner was held in subjection by the local clubs and benefit societies. These institutions, through their leading members, were also masters of the district council and of the Poor-law guardians, and the medical man who did not humbly submit himself to the clubs had no chance of being appointed to the post of parish doctor or as medical officer of health. The fact also that medical aid could be obtained so cheaply by the clubs had affected in a disastrous manner the salaries paid for the public service. Medical men who worked so cheaply for the clubs might be made to work as

cheaply for the Poor-law or sanitary authorities. At Leicester it was seen how a purely charitable institution had grown into a huge business, paying big salaries to lay organisers and only 1*s.* 9½*d.* per annum per member to the medical officers. The most popular medical officer of this dispensary had received a salary of £480 5*s.* 7*d.*, derived from the subscriptions of some 5000 members. The manager received £600 a year. Our Commissioner pertinently inquired, "Which of the two, the medical practitioner or the manager, did the most work; and above all which of the two did the most useful work? Why should medical men attend patients for the munificent payment of 1*s.* 9*d.* per annum so as to provide a comfortable salary of £600 a year to a layman?' In thickly populated districts our readers were shown how the efforts of one town—Loughborough to wit—were defeated by rapid railway communication, by which it was possible to call in consultants from neighbouring towns. Then from Nottingham we received the cheering description of the formation of a medical union, constituted expressly to deal with these economical problems. From the Black Country another sombre picture was painted of the position of the medical profession. Here medical aid was organised in public-houses as a means of selling drink not only to men, but to women. A publican had succeeded in enrolling ninety women who were to receive medical aid in sickness and funeral benefits, but there was a hard-and-fast rule by which out of every sixpence paid three half-pence were to be spent in ale! Another enterprising individual combined the sale on the tally system of plate-glass window-panes and of mangles with the providing of medical aid. That a medical man should be employed as a decoy duck for the sale of beer and of mangles is an illustration which can scarcely be surpassed of the degradation of the profession. At Sheffield, Derby, and Leeds the battle of the clubs continues to the disadvantage of the medical profession, which still remains ununited. While such apathy prevails in our ranks medical men will be the victims of every form of ignominious exploitation. Fortunately from Manchester, Folkestone, Lincoln, Nottingham, Eastbourne, Bexhill-on-Sea, Cork, Portsmouth, &c., we received more cheering news, and had the pleasure of recording more serious and energetic efforts at organisation. From Paris and from Brussels encouraging descriptions were also forthcoming of the growth of the spirit of organisation in the profession. In France it is estimated that, on an average, medical men receive 3½*d.* per consultation given to members of benefit societies. The State, on the other hand, grants half the usual minimum fee to the practitioner who attends a pauper. The minimum fee is two francs, so that the pay for attending a pauper is one franc, or ten pence, a much higher figure than is obtained either in England or France for medical advice given to the comparatively well-to-do members of clubs. The French medical men are seeking to bring about a reform by which they shall receive two francs for every consultation given to members of clubs, but they are willing to accept only one franc in cash on condition that the other franc shall be put to their credit as a subscription paid by them to the club and giving them a corresponding voice in the management of the institution. Members of benefit societies would then realise how much they owe to members of the medical profession. Last year we described the wonderful organisation and discipline of the Brussels Medical Syndicate and how the twenty practitioners employed by the benefit societies had gone out on strike. This year we were able to add further information. The strike had then lasted twelve months. Positions had been found for eight of the medical men and strike allowance was paid to the remaining twelve out of the funds of the union. As there were 453 members the funds were easily raised, and the benefit societies, after a stubborn resistance, were gradually yielding. For perfection of organisation and energy of action the medical men of Brussels have given a brilliant example to all Europe.

Hospital Abuse.

Following upon the "Battle of the Clubs" we commenced in the autumn of the year a series of studies on Hospital Abuse. At Plymouth and at Exeter our Commissioner found that persons possessed of ample means, on being refused admission to the local hospitals, came up to London and gained ready access to the metropolitan hospitals. Inquiries subsequently made confirmed the impression that great abuse existed in the metropolis. For instance, a person who only paid at St. Thomas's Home three guineas a week for his maintenance and treatment was proved at his death to have been in receipt of an income of £4000 a year. At Liverpool, what with charitable dispensaries and special hospitals, the general practitioners find their scope of action more and more limited. Indeed, on many occasions they are only called in on emergencies, and as soon as the first crisis is over the private practitioner is dismissed and the patient obtains what further medical attendance he requires from a hospital or a charitable dispensary. The proportion of persons of small but sufficient means who resort to hospitals is daily increasing, and the incomes of general practitioners decrease in consequence Nor has anything effective been done, or even attempted, to check this evil, so far, at least, as Liverpool is concerned. Committees have been appointed, lengthy discussions have ensued, but nothing practical has resulted. Medical men are not united. The dissatisfaction felt and expressed has not yet sufficed to obliterate rival interests and weld together the members of the profession. The blame is sometimes laid on the consultant, sometimes on the general practitioner, and more frequently on the public. The voluntary subscription system and the fierce competition of one hospital against another are also in turn denounced as the source of most of the evils. In the meanwhile the public, ignorant or indifferent to all these discussions, goes wherever it imagines the best advice can be obtained on the cheapest terms. The poor people, on the other hand, find that their places are taken up at the hospitals by persons who can afford to pay a private practitioner. Such, in general terms, is the nature of the abuses which our Special Commissioner has begun to investigate, and the articles already published have thrown considerable light on this complex and difficult question.

Honours to Medical Men.

In the list of new year honours was the name of Surgeon-General Sir JOSEPH FAYRER, K.C.S.I., LL.D.,

M.D., F.R.S., who received a well-deserved baronetcy, the only honour of this degree which has been bestowed upon a member of the medical profession during the year. His services both to the country and to the profession are too well known to need any words of commendation from us. Three knighthoods were conferred upon this occasion and Sir ROBERT MARTIN CRAVEN, F.R.C.S. Eng. and Edin., Sir WILLOUGHBY FRANCIS WADE, M.B., F.R.C.P., and Sir JAMES ACHESON MACCULLAGH, M.D., were the recipients of these well-merited distinctions. Surgeon-Lieutenant-Colonel SAMUEL HASLETT BROWNE, M.D., was made a Companion of the Order of the Indian Empire and HENRY ALFORD NICHOLLS, M.D., received a Companionship of St. Michael and St. George. Amongst the honours conferred for service in the Chitral campaign were the names of Surgeon-Major-General THOMAS MAUNSELL and Surgeon-Colonel GEORGE THOMSON, both of whom received a Companionship of the Bath. Two Companionships of St. Michael and St. George were conferred on medical men for services rendered in the Ashanti expedition, namely, on Surgeon-Lieutenant-Colonel MONTGOMERIE BLENNERHASSETT and on Surgeon-Major EDMOND MUNKHOUSE WILSON. The Birthday Honours list was chiefly remarkable for the absence of the names of civilian members of the profession and the paucity of names connected with the services. Among the honours bestowed upon this occasion were the promotion of Surgeon-Lieutenant-Colonel ALFRED SWAINE LETHBRIDGE to a Knight Commandership of the Order of the Star of India, the appointment of Brigade-Surgeon-Lieutenant-Colonel BENJAMIN FRANKLIN to a Companionship of the same order, the conferment of a Companionship of St. Michael and St. George upon Dr. J. ROGERS PASHA, and of a Companionship of the Bath upon Surgeon-Major-General CHARLES DODGSON MADDEN. For service in the Dongola Expedition Brigade-Surgeon-Lieutenant-Colonel THOMAS JOSEPH GALLWEY was made a Companion of the Bath, and Companionships of the Distinguished Service Order were conferred upon Surgeon-Major GEORGE DOUGLAS HUNTER and Surgeon-Captain RICHARD HUGH PENTON.

During the year the honour of knighthood was conferred upon Sir FRANCIS RICHARD CRUISE by Lord CADOGAN. Dr. C. C. DE BURGH DALY, who had charge of the hospital for the wounded at Newchwang during the late Japanese war, was presented by General CHANG with an illuminated address and with the Order of the Double Dragon—a very high distinction, conferring on him the rank of Mandarin.

Sir WILLIAM MACCORMAC, P.R.C.S., Mr. SAMUEL OSBORN, F.R.C.S., and Surgeon-Major-General JAMES JAMESON, Director-General of the Army Medical Department, have been appointed by HER MAJESTY Knights of Grace of the Hospital of St. John of Jerusalem in England.

Obituary.

The saddest part of our duty in such a review of the year as we now attempt is when we venture to recall the loss of the profession by death. We are well aware that our obituary list is never complete, but it is always complete enough to make us feel conscious of terrible blanks and breaks in association which can never be filled or mended. But after all admissions there survives the work that those whom we mourn have done and the example they have left. No other profession can boast of more faithful and arduous work done under harder conditions or more often involving sacrifices even of life itself. One death, that of Mr. JOHN MACE, M.B. Lond., resident physician to the Leeds Dispensary, was from typhus fever, a risk to medical life that has now almost died out. Two of our most promising young men have died from acute anæmia, as Mr. ARTHUR HENRY WILLIAMS, M.B., B.C. Cantab., of St. Leonards, and Mr. KENNETH MCLEAN of the Edinburgh Royal Infirmary. But as a set off to these melancholy cases of early death, longevity has many illustrations in our list. Mr. WILLIAM PENNY BROOKES, F.R.C.S. Eng., J.P., of Much-Wenlock, an accomplished Latin and Hebrew scholar, died at eighty-seven years. Mr. BRUNSKILL, of Staindrop, Darlington, was over sixty years in practice, and had received his diploma from Abernethy as well as a copy of his portrait. Mr. WILLIAM FRANCIS AINSWORTH, of Hammersmith, was born in 1807, and had made researches in Assyria, Babylonia, and Chaldea, and proposed the route which was finally adopted for the Indo-European telegraph. The year has taken away perhaps the greatest of our medical missionaries, Mr. WILLIAM LOCKHART, who would not budge with his hospital at Shanghai, though between the two fires of the Imperialists and the rebels in the Tae-ping rebellion, and, according to Sir HARRY PARKES, did more in China for peace and goodwill by his medical labours than diplomacy could do.

A year when the profession loses such members of its body as Sir JOHN RUSSELL REYNOLDS, Sir GEORGE MURRAY HUMPHRY, Sir JOHN ERIC ERICHSEN, Sir GEORGE JOHNSON, Sir BENJAMIN WARD RICHARDSON, Professor MORITZ SCHIFF, and Dr. GEORGE HARLEY—to mention a few names that fall at once from our pen—must be reckoned a year of heavy loss. We need not enter into any more particulars here concerning the lives of these distinguished men, inasmuch as we have published full notices of their careers upon the occasions of their deaths. Among other men of mark whose names have appeared in our obituary column for 1896 we may recall to the recollection of our readers:—GEORGE HUGH KIDD, M.D. Edin., Dublin; Surgeon-General J. EKIN, C.B., M.B. Lond.; ARTHUR NICHOLSON, L.R.C.P. Edin., L.R.C.S. Edin.; WILLIAM WILSON, M.D., C.M., F.R.C.P. Lond. (Florence); MARIANO SEMMOLA (of Naples); JOHN GASON, B.A. Dub., F.R.C.P. Irel. & L.M. (of Rome); JAMES SEATON REID, M.D. Edin., &c., father of the profession in Belfast; GERMAIN SÉE; THOMAS CHRISTIE SMART, F.R.C.S. Edin., ex-M.P. and Privy Councillor, Tasmania; CHARLES PAGET BLAKE, M.D. Edin., F.R.C.P. Lond.; THOMAS GALBRAITH LOGAN, K.C.B., ex-Director-General of the Medical Department of the Army; WILLIAM CHOLMELEY, M.D. St. And., F.R.C.P. Lond.; SAMUEL HOLDSWORTH, M.D. Pisa, M.R.C.P. Lond. (over sixty years in the profession and three times Mayor of Wakefield); CHAS. H. RALFE, M.A., M.B. Cantab., F.R.C.P. Lond.; ALFRED THOMAS BRETT, M.D. St. And., of Walford; HENRY MOORE BOWMAN, M.D. Lond.; JOHN BORLAND, M.D. Glasg., &c., Kilmarnock, a surgeon who seemed to achieve Listerian results without Listerian methods;

JAMES ANDREW SANDILANDS GRANT-BEY; JOHN DUNCAN MCDONALD, M.D. Glasg., Colonial Surgeon, Ceylon; JOHN JONES MERRIMAN, M.R.C.S. Eng., the last of a long line of general practitioners in Kensington; HUGH ROBERT CAMPBELL BARBER, M.B. Cantab; GEORGE BOWN MILLETT, of Penzance; HENRY SHARP TAYLOR, F.R.C.S. Eng. (Guildford); J. LANGDON HAYDON LANGDON-DOWN, M.D., F.R.C.P. Lond.; WILLIAM MORRANT BAKER, F.R.C.S. Eng.; JULES ROCHARD, M.D. Paris; EDWIN MORRIS, M.D. St. And.; THOMAS CHAMBERS, F.R.C.P., F.R.C.S. Edin. (of Sydney); JOHN KILNER, F.R.C.S. Eng., Bury St. Edmunds; Surgeon-General WILLIAM MONRO, C.B., M.D. Glasg., LL.D.; EDWARD FRED. ADAMS, M.D. R.U.I., Bolton; THOMAS LIMBERY, Newport, Mon.; and PATRICK FRAZER, M.D. St. And. (born 1805, became surgeon 1828), ex-physician to London Hospital. The useful lives which are implied in these names do not die; something survives in the communities in which they lived, in the services which they adorned; something having power to inspire and encourage those who are left behind.

Our Publications.

THE LANCET has this year been impelled by the importance of certain topics which were made the subjects of thorough investigation to publish the results in book form. Since the end of last year four reprints from our pages have been issued to the profession, and the circulation which has been attained by one or two of them is so encouraging that we shall continue to place before the profession in an accessible shape the results of future Commissions and investigations. The reports of the Hyderabad Chloroform Commissions, together with our own clinical report upon chloroform accidents, presented under one cover the whole question of death under chloroform up to the date of issue. The subject is one that is still under debate and will, we think, in the nature of things remain under debate for some time yet, but the position that is established is well shown in the volume. On the one hand, the Hyderabad Commission demonstrated the fact that in many more cases than had been previously supposed deaths occurred from respiratory trouble, thereby casting grave reflection upon the time-honoured edict that in chloroform administration the pulse alone should be watched. THE LANCET Clinical Report, on the other hand, was able to assign to many deaths cardiac failure as a cause and in those cases to eliminate respiratory trouble.

The small book bearing the title of "The Battle of the Clubs" was almost entirely a re-issue of our Special Commissioner's reports from various towns during an inquiry made by him into the working of medical aid societies and their relation to the medical profession as a whole, to their medical officers in particular, and, lastly, to the public. It demonstrated without contradiction that in certain of these institutions the interests of the medical officers have suffered severely, that the profession as a whole has been defrauded by the extension of a system of charity to persons well able to pay for medical attendance, and that in many cases the poor and sick public must be receiving inadequate treatment, the labours of the medical men being so badly requited.

A third book, "The Relative Cost and Efficiency of Plumbers' Work," may at first sight seem rather a departure from the rigidly medical scope of THE LANCET, but a moment's consideration shows that the subject of insanitary housing is one of the deepest consideration to medical men, and that effective plumbing is consequently a powerful weapon in the hands of the champions of preventive disease. The figures and tables will primarily be of the greatest importance to contractors, builders, and plumbers as they represent the price for which honest work can be fairly done, checking, on the one hand, sweating, and on the other hand, extortion. Secondarily, they will be of importance to those public officers who have the charge of the public health, to whom details of plumbing with honest prices attached may often be invaluable. A fourth book was a reprint of the report of the Commission upon Antitoxic Serums (*vide* p. 1839).

We have this year made a departure and published a serial work—the Biography of the Life of the Founder of THE LANCET—which will shortly be published in volume form. We hope that the story of the various reforms in the medical profession which were inaugurated, supported, and in some cases carried through, by the first Editor of THE LANCET has proved interesting reading.

Annotations.

"Ne quid nimis."

THE PLAGUE AT BOMBAY.

THE latest Anglo-Indian papers do not give any information regarding the progress of the plague in Bombay that has not already reached us by telegraph. The telegram that appeared at one time in a lay contemporary as to its marked decrease proved to be premature and inaccurate, for there are no signs at present of its abatement. As regards Calcutta it will be remembered that some cases had occurred in that city which had been returned as plague, but the medical board report that, looking to the evidence as a whole, they have no hesitation in expressing their opinion that there is no evidence that any case of true bubonic plague has yet (Nov. 30th) occurred in Calcutta, and that the cases which have been reported to them as plague were so described on the strength of an opinion as to the origin and character of certain microscopic organisms which has not been confirmed by the results of an independent inquiry conducted by an expert of long experience in bacteriological research—Dr. D. D. Cunningham, the Professor of Physiology at the Medical College. The *Times of India* of Dec. 5th calls attention to the researches of Dr. Yersin, a pupil of Pasteur, who had been working for five years at Saigon, and his alleged discovery of an anti-plague serum which as stated to have proved effective. Our contemporary also refers to the corroborative communication of our Paris correspondent published in THE LANCET of Nov. 14th last, in which it is stated, on the authority of the French Consul at Haiphong, that after Dr. Yersin had left Canton two plague patients had been cured by the serum which Dr. Yersin had left in the hands of the Chinese medical men, with special instructions as to the way of using it. The *Times of India* suggests whether the Government of Bombay might not, through the Secretary of State, endeavour to obtain the services of Dr. Yersin on a mission to Bombay for

the further prosecution of his researches and in order to subject his method of treatment to a more extended trial in connexion with the present outbreak there.

THE HEALTH OF DR. JAMESON.

THE recent announcements in the press that Dr. Jameson's condition has not been quite satisfactory have given rise to much anxiety, which we are glad to say has not been warranted by any serious alteration in the patient's health. He is slowly but surely progressing towards convalescence, and no untoward symptoms whatever have supervened on the operation. But his recovery has been retarded by his sleepless nights. It is stated that he feels very acutely the fact that he is free while his officers are still detained in prison.

SUICIDE: NOTES OF ITS HISTORY, PATHOLOGY, AND TREATMENT.

IT is commonly assumed, and probably not without reason, that the practice of suicide, at all events in civilised countries, is decidedly increasing. In making this admission, however, we must take account of other factors besides those which conduce to intensify the struggle for existence and so to heighten nervous strain and engender worry and despair. We have to deduct somewhat from the total of our conclusions because of our ignorance of the unrecorded customs of past times. We know also that suicide has, in older states of society, had a place in the waywardness of fashion. Other Romans died like Brutus. The many-sworded gentry of Japan were forbidden by etiquette to survive an eclipse of the sunshine of imperial favour. We might, no doubt, by searching multiply such illustrations and so, if only by comparison, redeem somewhat the character of our own less romantic but, perhaps, more harassed age. It is in keeping with the modern scientific tendency that suicide in its mental relation should have been made a subject of inquiry. The latest effort of this kind with which we are acquainted is a short "Study with an Attempt at Classification" by Dr. Leonhardt of Lincoln, Nebraska. There is, according to this writer, something to be said both for and against suicide, though a further examination of his views must, in the opinion of most persons, considerably modify this rather equivocal statement. In his classification cases are included which few of us would ever think of placing there. It is divided into three sections: (1) the irresponsible, where the fatal act has been that of a feeble or disordered intellect; (2) the innocent, where death has been the cost of a martyr's or a hero's obedience to duty; and (3) the criminal, where a selfish reason is the motive. It is not always an easy matter to separate this third class from the first, and it may be said that a grain of truth at least can constantly be found in the verdict of temporary insanity which is so regularly characteristic of the opinion of coroners' juries on the victims of suicide. Very few persons, on the other hand, would ever dream of applying the term "suicide" in any but a purely poetic sense to those persons whom Dr. Leonhardt includes in his second class. If we were strict in using his nomenclature in such cases this term would practically cover a large majority of all deaths, for after all the wear and tear of life voluntarily encountered must have something to do with its termination. We prefer to accept his third class as including all instances of self-destruction which are truly voluntary and accountable acts, and which, being the effects of a self-centred concern, are essentially criminal. He says that "no altruistic suicide is ever criminal." In truth, deliberate and intentional self-destruction, which is in the great majority of cases regardless of the claims of others, is that form which the public sense invariably associates with the term "suicide." As such it is commonly and justly repudiated by all well-balanced minds, even in the presence of despair. Its cure is in an active altruism with its roots in faith, will, and duty.

STREET NOISES.

PORTSMOUTH is the latest of the big towns to object to the intolerable nuisance of noisy streets, and at a council meeting last week it was proposed that a committee should prepare by-laws relating to disorderly conduct and the sale of goods by outcry in the streets, with a view to dealing with such offences in what was termed a "strictly legal and operative" manner. This was not thought by some members to go far enough, and an amendment to include "all noises" was agreed to. Sir John Baker, M.P., especially asked that "screaming, howling, and noises called singing" be included. Portsmouth is a great sufferer from "noises called singing," especially on Sundays, and no one will be likely to disagree with Sir John Baker in his opinion that he knows no greater desecration of the Sabbath. Another indication of the way the wind is blowing occurred at Eastbourne on Monday, when an Italian organ-grinder was fined 5*s.*, or seven days' imprisonment, on the complaint of a private resident.

THE WESTMINSTER PLAY.

THE scenic representation of the classic play—in other schools a revival—has for more than three centuries been a time-honoured custom at Westminster—ever since its foundation, in fact, by Queen Elizabeth. On the Continent, too, the practice, common enough in the sixteenth century—when at Bordeaux, for example, George Buchanan's *Jephthes* or *Baptistes* used to have his young pupil Montaigne in the caste,—is also in course of revival, as the performances of the *Trinummus* at Turin serve to show. The soundness of the Westminster tradition is vindicated, moreover, by the later views as to the best mode of reaching and impressing the mind of youth. In defiance of the Horatian precept that the eye is more effective than the ear in rousing and maintaining attention, school-teaching has made the latter its leading—if not its only—channel, and education has suffered accordingly. Now the ear is relegated to its proper place as one out of three of the avenues to knowledge, and, indeed, as only in certain departments the most important of the three. In the sciences of observation and practice the maxim of the eminent Cambridge anatomist, surgeon, and teacher, the late Sir G. M. Humphry, "eyes first, hands next, ears last," is receiving practical effect, and its transference to other fields of learning, where such is possible, is among the most salutary of recent innovations. The Greek and Roman tragedy or comedy is now no longer an affair of the printed page merely. The "eye" and the "hand" (or gesture) are brought in to assist the "ear" in their interpretation, and the result is seen in a far more vivid, far more just appreciation of such *chefs d'œuvre* on the part of the present than on that of previous generations. All honour to Westminster for having so long stood alone in vindicating what subsequent experience has shown to be sound method, and long may she maintain the lead among the rivals her example has stimulated and her success has encouraged. This year it is the turn for representation of that masterpiece, the *Phormio*, which, according to one of its best critics, "for gaiety of intrigue, for well-prepared action, for variety of characterisation, for rapidity and animation of scenic movement, for vivacity of dialogue, and, above all, for honourable sentiment, ranks higher even than the others of Terence." Otto Ribbeck, in his great "Geschichte der Römischen Dichtung," though giving the

palm to the *Adelphi*, goes a long way in concurrence with this estimate of the *Phormio*, dwelling on the consummate skill with which the character from whom it takes its name adapts himself to every emergency, and delicately indicating the touches which reveal the author's own experience of what it was to be a slave. The *Phormio* having had a long run, so to speak, on the *dilettante* stage of the Continent—its representation in the original text throughout last century at Parma, at Ferrara, and at Rome being among the more memorable instances of scholarly reproduction—appeals once more to the cultured appreciation of our own day; and, thanks to profounder and more precise archæological research, may now be enjoyed to better purpose on the banks of the Thames than it has yet been, since its first performance, on the banks of the Tiber.

THE CASE OF THE QUACK FERDINAND.

THE quack John Ferdinand was tried before Mr. Justice Lawrance in the Central Criminal Court on Thursday, Dec. 17th, on the charge of having committed perjury at the coroner's inquest on the death of a woman named Sophia Louisa Holliday. The evidence for the prosecution showed that Ferdinand had been a most dangerous pest to society for a long period. Twenty-six years ago he had been convicted of stealing bread, at which time he seems to have been a plumber and glazier in Somersetshire. He had since carried on business as a quack in Stockton-on Tees, Manchester, Birmingham, Cheltenham, and Swindon, and had advertised himself largely as the possessor of a certain method of curing cancer. He claimed to be a Doctor of Medicine of the United States of America and to have a diploma from an eclectic medical school in Pennsylvania. Doubt was thrown upon the truth of these claims, though for all that we can see they might have been admitted without bettering his case. There is, we need hardly say, no such degree as M.D. U.S.A., while eclectic institutions have long been known to be shops for the sale of licences to practise gross quackery. Ferdinand was sentenced to twelve months' hard labour for perjury in Mr. Braxton Hicks's Court, and no one can consider the sentence a heavy one. This fellow has lived for years on the credulity of the sick, has buoyed up miserable men and women with false hopes, has cozened them out of the money that might have been spent in alleviating their misery, and, lastly, in many a case by his pretensions of ability to cure has prevented them from seeking medical assistance until too late. What is this last crime but manslaughter?

THE TRAINING OF NURSES IN RELATION TO REGISTRATION.

WE have learned with regret that a feeling of discontent has arisen among the members of the Royal British Nurses' Association. A correspondent writes explaining the cause of disagreement in a letter which the limitation of our space will not permit us to publish at length, but which appears to deal in a practical manner with the subject at issue. This, we are informed, is contained in the proposition lately brought forward that asylum attendants should be placed upon the register of the association though they have not undergone the training required of other nurses. Our correspondent, one of the latter, not unnaturally resents this proposal as tending to lower the status of the association and of trained nurses generally, and, moreover, as being likely to impose upon the confidence of the public, who commonly regard all qualified attendants on illness as persons trained more or less after a similar and generally accepted model of proficiency. This is certainly our own view of adequate qualification. Effective training, whether in nursing or in any other walk of life, cannot be solely or primarily special. General principles, covering the whole field of the work undertaken in all its relations, must first be understood. Then specialisation may become intelligent and practicable. By what means it is proposed thus to enlighten the service of the asylum assistants, or whether in the course of their special nursing duty opportunities are found for their more general culture, we are not informed. If such are not in some way afforded and improved we must admit our adhesion to the proposal made by our correspondent that the qualification for such registration as is contemplated should entail an adequate course of training in one of the general hospitals.

SOUTH-EASTERN POOR-LAW CONFERENCE: WHY IS WORKHOUSE NURSING SO BAD?

THE difficulty of procuring good nurses in workhouses and infirmaries, especially in the provinces, seems to be very considerable, and the nursing as it is performed in some of these institutions is anything but satisfactory. Consequently anything which throws light on the causes and remedies for these defects is very welcome. Mr. C. S. Roundell, in a paper on Nursing in Workhouses read at the South-Eastern Poor-law Conference on Dec. 3rd, attributed these defects mainly to the relation of the nurse to the matron, the former of whom is generally more or less trained and the latter always untrained. This relationship cannot be otherwise than a strained one, and undoubtedly it has much to do with the difficulties to which we refer. It would be much better if the nurse had a position more independent of the matron, somewhat after the manner of schoolmistresses where there is a small school connected with the workhouse. There is, however, a greater obstacle than the one to which Mr. Roundell refers in the existence of an unrepealed article in the Poor-law Order of 1847, which expressly permits the master and matron of a workhouse to employ semi-able-bodied inmates to look after the sick. As long as this article exists pauper nursing will go on, and the nurses, short-handed as they are, will always be compelled by the master and matron to avail themselves of these semi-able-bodied persons who have come into the workhouse by reason of their being social failures in life, and who of all people in the world are least fitted to tend the sick.

"HOSPITALS AND DOCTORS."

ONE of our contemporaries, the *Daily Mail*, writing on the subject of Hospital Abuse favours the argument of those comfortable people who find bad excuses for doing that which they know they have no right to do—viz., taking medical help on gratuitous or charitable terms at hospitals which are meant for the poor. To do so is to exclude the poor or to keep them waiting hours longer than they would otherwise be kept and is to get charity under false pretences. The excuse that ordinary practitioners cannot treat their cases is on the face of it absurd. The chances are that the patients see a younger medical man, or one less experienced, or one with less leisure at the hospital. The education of medical men in hospitals and outside is the same. It is obvious that medical men who can treat the disease which constitutes the bulk of medical practice can treat the bulk of the cases which throng the out-patient department of our hospitals and threaten to demoralise the whole hospital system. A very apt illustration of the evil of this system and of the unfortunate influence of the press in supporting unreasonable people is given in THE LANCET of Dec. 12th by our Special Correspondent writing on the Children's Infirmary, Liverpool: "A child was brought who had an abscess due to a cut on the head. This was so evidently a case of abuse that the medical officer advised the boy's

mother to take him to her usual family attendant, whose name she had mentioned and who, it so happened, had a vast experience in wounds of the head. Though this person was spoken to quite gently and in private her husband nevertheless wrote an indignant letter to the press inquiring what hospitals were for if they could not attend to a boy with a wounded head." It would be interesting to know how much this gentleman subscribes to hospitals, which exist no more to supply well-to-do boys with dressings for their wounds than with mutton for their dinners. The parent was in no sense an object of pity. The case was not one of emergency. The whole medical profession of Liverpool was at the service of this parent who aired his grievances in the press, and he had no more claim to such services gratuitously and at the cost of other people than he had for his boy's clothes or food on such terms. A former house surgeon at the Children's Infirmary told our Commissioner that he sometimes had 150 patients in a day. Whose blame is this? Next to that of the unreasonable parents who take the charity meant for the poor, it is the blame of the committee of the charity who allow such abuses.

REPREHENSIBLE IGNORANCE.

IN the cross-examination of a medical prosecutor at the Southwark Police-court who possessed the degree of M.D. Edinburgh, the following dialogue is reported to have taken place:—

The Solicitor for the Defence: Yours is an Edinburgh degree?

The Prosecutor: Yes.

The Solicitor for the Defence: You can buy it for so many pounds?

The Prosecutor: It is untrue.

The Solicitor for the Defence: We all know these degrees can be bought for so many pounds.

The Magistrate: That observation should not be made.

There are degrees of ignorance, and a man may attain to many of them without arousing more than the sympathy of his fellows; but this solicitor is too ignorant to escape so lightly. In reckless exercise of what he conceives to be his duty as an advocate he has miscalled Edinburgh University and thrown mud at the medical profession, and neither the graduates of that ancient University nor the members of that honourable profession are likely to look upon his ignorance as pardonable. They will consider it, and rightly, very offensive.

THE DAVY-FARADAY LABORATORIES.

ON Tuesday afternoon last His Royal Highness the Prince of Wales opened the Davy-Faraday Research Laboratories, presented to the Royal Institution by Dr. Ludwig Mond. This munificent gift consists of the large house in Albemarle-street, adjoining the Royal Institution, which Dr. Mond has completely equipped as a research laboratory, fitting it with the most modern improvements in the way of instruments and appliances for research in chemistry. Dr. Mond has also placed to the credit of the Royal Institution a very handsome endowment. The theatre of the Royal Institution was well filled on the occasion and among the audience were many leading members of the medical profession. Dr. Ludwig Mond, in formally presenting his noble gift to the Royal Institution, made a most interesting speech, in which he explained the details of the inception of this scheme and stated that he had named the laboratories the Davy-Faraday Research Laboratories in perpetual memory of those two great pioneers, who carried out their researches almost on the very spot where the new laboratory stands. His Royal Highness the Prince of Wales, in reply, expressed on behalf of the nation the gratitude due to Dr. Mond. He remarked that the identification of the new laboratories with the names of two of the greatest of the former professors of the Royal Institution and of English men of science was graceful and appropriate on the part of the donor. The present Professors of Physics and of Chemistry at the Royal Institution, Lord Rayleigh and Professor Dewar, have undertaken the important duties of directing the work of the new research laboratories without remuneration, a fact which, while it redounds infinitely to their credit, should stimulate further munificence in the direction of endowment. After the opening ceremony Professor Dewar exhibited a number of interesting experiments illustrating the uses of liquefied air in scientific research. He liquefied some of the air of the theatre, an experiment which excited the greatest interest among the audience.

DR. ROUX has accepted a decoration from the German Emperor. Pasteur, it will be remembered, declined a similar proffered honour, but Dr. Roux—and quite rightly, to our thinking—sees no reason why he should follow the suit of his great master.

THE Queen has been pleased to give directions for the appointment of William Forbes Newsam, M.D. (Colonial Surgeon), to be a Member of the Executive Council of the Island of St. Vincent and also to be an Official Member of the Legislative Council of that Island.

SIR JOSEPH LISTER has accepted the appointment of consulting surgeon to the City of London Hospital for Diseases of the Chest at Victoria-park, succeeding the late Sir John Erichsen, F.R.S., in this office.

THE remains of Louis Pasteur, which have lain in the cathedral of Notre Dame since the funeral a year ago, are to be removed to their final resting place at the Pasteur Institute to-day (Saturday).

PRESENTATIONS TO MEDICAL MEN.—Dr. William Brendon Gubbin of Portobello, Midlothian, owing to the state of his health, has had to relinquish his duties and remove to England. Previously to his departure he was entertained at a public dinner presided over by the Provost and at which there was a large attendance. The members of the Order of Foresters presented a silver bowl and the Railway Ambulance Class a photograph camera.—At the last meeting of the South Wales and Monmouthshire Branch of the British Medical Association it was unanimously decided that fifty guineas should be voted from the funds of the branch towards a testimonial to Dr. Alfred Sheen of Cardiff, who for twenty-five years had been honorary secretary of the branch.—On Dec. 9th the performers in the recent hospital amateur theatrical week at Bath presented to Dr. Lionel Alexander Weatherly four handsome silver candlesticks in recognition of the trouble and time he had devoted to the direction of the performances.—Dr. John Cockton, who for upwards of seven years has been assistant to Dr. Thompson of Lightburne, Ulverston, on his leaving that town has been the recipient from his friends of a silver cigar case, suitably inscribed, a matchbox pendant, a silver-mounted briar pipe, a Worcester-ware tobacco-jar, ash tray, and match stand.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The December meeting was held at the City of London Infirmary on Dec. 19th. Under the guidance of the Medical Superintendent, Mr. W. D. Buncombe, the institution was inspected. In the subsequent discussion the President, Mr. Walter Burney, occupied the chair, and the importance of the establishment of training schools for nurses at all infirmaries was specially dwelt upon. Mr. H. E. Harris (St. Saviour's), Mr. J. R. Lunn (Marylebone), and Dr. F. S. Toogood (Lewisham) reported in most favourable terms upon the schemes as working in their institutions.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER L.

In conclusion.

"HANG your reform!" said Mr. Chichely. "There's no greater humbug in the world. ..... I hope you are not one of THE LANCET'S men, Mr. Lydgate—"

"I disapprove of Wakley," interposed Dr. Sprague; "no man more: he is an ill-intentioned fellow ..... But Wakley is right sometimes," the doctor added, judicially; "I could mention one or two points in which Wakley is in the right."[2]

The difficulty of arriving at a definite opinion concerning Wakley under which poor Dr. Sprague—a physician distinguished, we are told, for "weight" rather than for "penetration"—laboured was one in which many of Wakley's contemporaries were involved. Dr. Sprague, while disapproving of Wakley, was forced to admit that there were points concerning which he was right. Dr. Sprague, as became a respectable and respected member of one of the London Colleges, wished to wholly condemn the great agitator against the methods of those Colleges, but he felt that to do so would be unjust because of the manifest good sense which had inspired other of Wakley's work, for instance, his crusade against badly conducted coroner's inquests. George Eliot was accurate in thus describing Dr. Sprague as muddled and uncertain in his estimate. She has in so doing exactly recorded the way in which many worthy members of the profession regarded Wakley while his general work of reform was in its fierce inception. The reason for this is now manifest. These men lived in Wakley's own time and could not appreciate how much in advance of that time he was. It is impossible to correctly interpret the work of a reformer from hour to hour. When a man spends his days in battle against wrongs and abuses it is, and must ever be, his fate to be compelled to wait for years without recognition of the value of his work—if value there be—by persons whose good opinion is alone worth having. The reason of this is that the honest reformer and the irresponsible crank make appeals to the public judgment so similar in appearance that only the very discriminating can detect which is the man of barren promise and which the man of fruitful performance. Without allowing a not inconsiderable space of time to expire before giving an account of Wakley's full and energetic life no adequate and impartial view of him could be obtained. A mountain cannot be seen from its side or even from its base, some little peak, some unimportant excrescence of the outline, obscures the whole view. We must get to a distance. Just so with these big and busy careers. They cannot be judged during their course, and they cannot be summed up at their immediate close; distance—a long distance—of time must be allowed to elapse before the manner of life that has been led and the amount of good or, it may be, ill that the world has reaped therefrom can be estimated.

In the case of Thomas Wakley this is very well seen in the way that contemporary historians have been unable to make up their minds whether to approve of him or to disapprove of him most. They never seem to have been sure whether it was the real Wakley upon whom they were pronouncing an estimate or only one of the many sides of his character. William Nassau Molesworth, an accurate and laborious historian, dismisses him with a few words as a Radical. "The History of Our Own Times" depicts him only as a Radical. From these it might have been expected that at any rate his radicalism would be undisputed. But it was not so. *Punch*, at the time when Wakley was most persistently before the public as a reformer, devoted many pages of pictures and many columns of print to the attempt to show that he was less than half-hearted as a Radical and really by conviction a Tory. Dickens discusses Wakley's qualities as a coroner at length, but does not allude at all to his work as a medical reformer or as a politician. Now Dickens was a personal friend and was not only familiar with Wakley's political work but shared many of his views—for example, his belief in the right thinking of the masses and his hatred of the Poor-law Amendment Act and red-tapeism. From the greatest English romancer to a purveyor of curbstone doggrel is a far cry, but James Catnach's publications represented general opinion in a wonderfully accurate manner. They reflected the views of the man in the street, and, at the same time, coloured those views. In Catnach's "Political Alphabet for the Rise and Instruction of Juvenile Politicians" the rhymer picked out what he considered to be the salient points in the chief public characters of the date—1842 or thereabouts. Wakley represents the W's in this medley—the obviously greatest man for the initial, the Duke of Wellington, being alluded to with affectionate familiarity as Arthur and Nosey. It is as a sworn foe to the Corn Law that Catnach presents Wakley to the people, his intimate though brief association with Cobden over-topping in the mind of the popular ballad-monger all his other work, even his championship of the liberty of the press. Barham was also a popular ballad-monger, though he rightly earned his position as a brilliant humorist, and his mention of Wakley makes him out a prick-eared public official. In Saunders's "Eminent Political Reformers," edited by William Howitt and published in 1840, the chief characteristics of Wakley's public career are said to be his enmity to the Poor Law Amendment Act and his disapproval of the severity and impolicy of the treatment of Canada by Sir Robert Peel. Hansard, on the other hand, reports but a very few sentences as Wakley's contributions to debates on these two subjects, while his speeches upon such topics as an unstamped cheap press, flogging in the army, the protection of women and children in factories, medical witnesses in coroners' courts, the Sunday opening of museums, the property qualification of members of Parliament, the Chartist agitation, copyright, and motions for reform in the medical profession are given at length.

But all this discrepancy of opinion concerning Wakley's work did not arise from the fact that the work was too recent to be correctly appraised. There was another thing which tended to interfere with just judgment—namely, that enthusiasm of his to which allusion has so frequently been made in the course of this biography. It was his habit to write, to speak, and to act as if nothing on earth mattered to him save the question under discussion, and more, as if the man to whom any other question might appear as of even comparative importance was convicted of foolishness. This coercive method had a double effect. It drove into fierce opposition men of an argumentative turn of mind, while it compelled the adherence of the large class which desires to have its opinions selected for it before it can display the courage of the same. Consequently Wakley's

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII., XXIV., XXV., XXVI., XXVII., XXVIII., XXIX., XXX., XXXI., XXXII., XXXIII., XXXIV., XXXV., XXXVI., XXXVII., XXXVIII., XXXIX., XL., XLI., XLII., XLIII., XLIV., XLV., XLVI., XLVII., XLVIII., and XLIX. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, and 30th, June 6th, 13th, 20th, and 27th, July 4th, 11th, 18th, and 25th, Aug. 1st, 8th, 15th, 22nd, and 29th, Sept. 12th, 19th, and 26th, Oct. 3rd, 10th, 17th, 24th, and 31st, Nov. 7th, 14th, 21st, and 28th, Dec. 5th, 12th, and 19th respectively.

[2] Middlemarch, Book II., Chapter xvi.

audience was never neutral, but always for him or against him, and his name was always associated by friend or foe with the particular subject, his treatment of which had either compelled admiration or provoked animosity.

It was with a view of enabling a right estimate of Thomas Wakley to be formed that this biography has been written. With the facts of his busy life before us it is possible to take an all-round survey before summing up, while time has cooled the hot personal feelings that prevented Wakley's contemporaries from delivering an unimpassioned verdict upon his merits. The following words of the late Sir John Eric Erichsen were taken as a text at the commencement of the story. They will be found in a letter addressed by him to the Editors of THE LANCET and published on Dec. 28th, 1895, in these columns:—

"The present generation of medical men," wrote Sir John Eric Erichsen, "know little of him (Wakley) and are for the most part ignorant how much they owe to him for exposing and fearlessly attacking the manifold abuses that existed in every department of the profession in the colleges, hospitals, and medical schools in the first third of this century. Corruption, jobbery, nepotism, promotion by purchase were rife in the colleges and hospitals and medical education was at a low ebb when Wakley entered on his career as a journalist. By his outspoken and fearless denunciations of these abuses he brought about their reform and so cleared the road to fame and fortune for those members of the profession who had to rely solely on their own ability and power of work. It was, in fact, Mr. Wakley who made a William Jenner or an Andrew Clark possible."

Surely this high estimate of the value of Wakley's work was just.

THE END.

THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

(*Concluded from page 1707.*[1])

The Attack-rate among Vaccinated and Unvaccinated.

LEAVING the subject of small-pox fatality the Commission proceeds to discuss what is, strictly speaking, a preliminary question—viz., the liability to attack by small-pox among the vaccinated and the unvaccinated. This question was very elaborately investigated in the epidemics of the six towns specially reported on. Houses actually invaded by small-pox constitute an invaluable field of observation in this connexion. In Sheffield 18,020 vaccinated persons and 736 unvaccinated persons lived in houses invaded by small-pox and were in that way exposed to infection. Of the vaccinated 23 per cent. were attacked by the disease and of the unvaccinated 75 per cent. were attacked. These figures include all ages. Confining the comparison to children under ten years old, 4439 vaccinated and 263 unvaccinated children lived in houses invaded by the disease. Of the former, 353 or 7·8 per cent. were attacked, and of the latter 228, or no less than 86·9 per cent., were attacked. Thus of 263 unvaccinated children exposed to attack only 35, or 1 out of 8, escaped, while of 4493 vaccinated children exposed to attack 4140, or 10 out of 11, escaped. In Warrington, where the total figures were considerably smaller, the attack-rate in invaded houses was among vaccinated children 4·4 per cent., and among unvaccinated 54·5 per cent. Among persons over ten years old the vaccinated had an attack-rate of 29·9 per cent and the unvaccinated of 57·6 per cent. Regarding these figures Dr. Savill observes: "I could ascertain no reason for this remarkable difference in the attack-rate in the two classes, unless the fact of vaccination protected the vaccinated persons from being attacked by small-pox. Being members of the same families, they lived in the same houses (which, be it noted, were of a remarkably uniform type), ate the same food, often did the same work, and were exposed to the same hereditary and external influences." The same story is told regarding Dewsbury and Leicester and Gloucester. In Leicester, for example, Dr. Coupland reported that in vaccinated children under ten years old the attack-rate in invaded houses was 2·5 per cent., the exact figures being 78 and 2, while among the unvaccinated the attack-rate was 35·3 per cent., the figures being 283 and 100. In Dewsbury the corresponding percentages among vaccinated and unvaccinated children were 10·2 and 50·8 and in Gloucester 8·8 and 46·3. As to persons over ten years old the attack-rates among the vaccinated and unvaccinated in invaded houses was in Dewsbury 27·7 and 53·4 respectively, in Leicester 22·2 and 47·6, and in Gloucester 32·2 and 50·0. It is a striking fact that the epidemics in all these separate towns teach the same lesson. Indeed, it appears from the Commission's report that the figures for Gloucester had not been obtained until the paragraphs dealing with the question of attack-rates in the other epidemics were already in type, but the story told by Gloucester was so exactly similar that beyond a re-calculation of percentages no alteration was required in the paragraphs.

The small-pox hospitals tell the same tale as the six towns. In Homerton Hospital the admissions under ten years of age were reported by Dr. Gayton to be 2493, and no less than 47 per cent. were unvaccinated. In Fulham Hospital 370 children under ten years of age were admitted by Dr. Sweeting, and 168 of these, or 45·4 per cent. were unvaccinated. Now it is perfectly well known that the proportion of unvaccinated children in London in the period 1873–1885, to which these statistics belong, did not approach 45 or 47 per cent. The figures for the Highgate Hospital are relied on by Dr. Collins and Mr. Picton to throw doubt on the lesson derivable from Homerton and Fulham; but Highgate is the exception which proves the rule, as the conditions of admission to the Highgate Hospital differed essentially from those of admission to the other hospitals. That, however, is a point which space will not permit to be dealt with here.

Severity of Type of Small-pox amongst Vaccinated and Unvaccinated.

Under this heading the Commission points out that small-pox varies greatly in the degree of its severity and that it is important to ascertain whether vaccination, when it fails to prevent attack by small-pox, has yet an influence in rendering the disease mild rather than severe. In the Sheffield hospitals during the epidemic, account was taken of the facts bearing on this question. Of 1298 vaccinated persons, 1075, or 82·8 per cent., had the disease mildly, in either the varioloid or the discrete form, and 223, or 17·2 per cent., had the disease severely, in either the coherent or the confluent form. Among 443 unvaccinated patients 82, or 18·5 per cent., had the disease mildly and 361, or 81·5 per cent., had the disease severely, so that the relation which the severe and milder forms bore to each other was almost exactly reversed as between the vaccinated and the unvaccinated. In Dewsbury Dr. Coupland found that among the vaccinated, 528, or 82 per cent., had the disease in the mild or discrete form, and 116, or 18 per cent., had it in the coherent or confluent form. Among the unvaccinated, 84, or 23·1 per cent., had the disease in the mild or discrete form, and 280, or 77 per cent., had the coherent or confluent form. Taking children under ten years of age, among the vaccinated, 43, or 95·6 per cent., had a mild or discrete attack, and 2, or 4·4 per cent., had a confluent attack; while among the unvaccinated, 51, or 29·9 per cent., had a mild or discrete attack, and 120, or 70·2 per cent., had a coherent or confluent attack. For Leicester similar figures are given, the milder cases being 81·4 per cent. among the vaccinated and only 27·2 per cent. among the unvaccinated. The figures for London and Warrington teach a similar lesson and need not be quoted. In summing up the facts regarding severity of type the Commission calls attention to "the bearing upon one another of the facts relating to the fatality, the attack-rate, and the type of the disease." Regarding the classification into vaccinated and unvaccinated they say, 'We have already pointed out that it is more than improbable that on a division of the persons who suffered from small-pox into two such classes the fatality should be so strangely different. ..... What is to be said when it is found that apart from the fatality of the disease its type in the two classes also differs, and perhaps even more widely than its fatality does, and that the milder type distinguishes the

[1] The previous articles on this subject were published in THE LANCET of Sept. 26th, Oct. 3rd, 10th, and 31st, Nov. 28th, and Dec. 12th, 1896.

same class which exhibits the smaller fatality? That this should be a mere coincidence is incredible when it is observed that the phenomenon is uniform, not only in the case of epidemics in five different towns, but in the case of the same epidemic in different parts of the same town. The facts surely afford strong corroboration of two propositions—first, that a classification was on the whole accurately made in these cases of persons whose condition in relation to small-pox differed from one another; and secondly, that this difference of condition was due to vaccination." Here, again, the Commission might have called attention to the fact that in the towns which are hot-beds of anti-vaccination the unvaccinated children did not remain unvaccinated owing to any certification of unfitness for vaccination, but owing to general neglect of the practice, so that the allegation that feeble health makes the unvaccinated fall victims to small-pox cannot be maintained.

The Efficiency and Sufficiency of the Vaccinal Operation.

The question whether the protection afforded by vaccination differs in proportion as the operation has been more or less thoroughly performed is next considered. The conclusions from the details of 825 cases treated in the Sheffield Borough Hospital is "that there is a progressive diminution in the fatality and also in the severity of the attack in direct ratio to the increase in the number of primary vaccination cicatrices." In London, where the figures are larger than in the other places and give a surer foundation for opinion, Dr. Luff obtained information regarding the number, the area, and the foveation of the marks of vaccination in 1580 attacks of small-pox among the vaccinated. Regarding severity of type of the disease he found that in cases with only one vaccination scar there was one severe case of small-pox to 7·4 discrete cases; that with two vaccination scars there was one severe case to 11·9 discrete cases; that with three vaccination scars there was one severe case to 12·3 discrete cases; and that with four vaccination scars there was one severe case to 37·2 discrete cases. Where the vaccination scars were foveated the proportion of severe attacks was much less than where they were unfoveated. Among 1018 cases with foveated scars there were only 47 severe or confluent cases, while among 562 cases with unfoveated scars there were 59 severe or confluent cases. Similarly, the 1018 foveated cases yielded only 13 deaths, or 1·2 per cent.; while the 562 unfoveated cases yielded 18 deaths, or 3·2 per cent. Regarding the area of scars Dr. Luff made three classes according as the area was (1) under 0·25 of a square inch, (2) from 0·25 to 0·5, and (3) over 0·5. Among Class 1 the severe attacks were 12·6 per cent., among Class 2, 4·6, and among Class 3, 3·9. As to fatality, in Class 1 there were 253 cases with 6 deaths, or 2·3 per cent.; in Class 2, 385 cases with 7 deaths, or 1·8 per cent.; and in Class 3, 702 cases with 10 deaths, or 1·4 per cent.

Returning to the question of the variation in the number of marks in relation to the variation in protection against fatal small-pox, it is stated that data exist regarding over 20,000 cases, and that 6839 of these are comparatively recent cases. Of the latter number there were with one mark, 1357 cases with 85 deaths, or 6·2 per cent.; with two marks, 1971 cases with 115 deaths, or 5·8 per cent.; with three marks, 1997 cases with 75 deaths, or 3·7 per cent.; and with four marks, 1514 cases with 34 deaths, or 2·2 per cent.

Re-Vaccination.

The Commission gives a very large amount of statistical and other evidence of the great value of re-vaccination. In Sheffield in the epidemic the re-vaccinated population was 64,431, of whom 27, or 0·04 per cent., were attacked by small-pox. For comparison it may be noted that over ten years of age the attack-rate among persons once vaccinated was 1·9 per cent., and among the unvaccinated 9·4 per cent. Data are given as to re-vaccination in the other towns where epidemics were specially investigated, in the postal and police services, among the nurses and attendants in small-pox hospitals, in the army and navy, and so forth, but the details are so numerous that a synopsis cannot well be attempted here. This is the less needful because the evidence already given regarding the protective power of a single vaccination is generally applicable to a second vaccination in so far as the protection originally conferred may have diminished in any individual. Attention may be called to one paragraph. Opponents of vaccination have never tired of assailing Lord Playfair for that part of his famous speech in the House of Commons in which he contrasted the small-pox of the French and German armies in the war of 1870-71. From the following passage it would appear that Lord Playfair had very reasonable justification for the attitude which he took: "A comparison of the mode in which the very general small-pox epidemic of 1870–71 affected the German and French armies in those years is especially worthy of attention. In the year 1834 vaccination was made compulsory for soldiers in the Prussian army. Although it may not have been enforced with complete thoroughness there seems to be no doubt that the German army was, on the whole, a well-vaccinated class at the time of the campaign of 1870–71. We do not think that there can be any real doubt that the French army was during the same period in a condition in that respect less satisfactory. According to the official returns the number of small-pox deaths in the German forces during the years in question was only 316. It was stated by Monsieur de Freycinet, when Minister of War, that 23,400 French soldiers died from small-pox during the years 1870-71. We have not been able clearly to ascertain how these last figures were procured. They were not derived directly from any official return. It would seem that the average derived from a limited number of returns relating to particular portions of the army was applied to the army as a whole. It is quite possible, therefore, that the figures given may not be accurate and that the number stated is in excess of the real number of deaths; but we do not think it is possible to doubt that the ravages of small-pox in the French army was very great and that the mortality was enormously in excess of that suffered by the force which was opposed to them. Various facts which have been deposed to, as, for example, the small-pox deaths in the ranks of the French soldiers imprisoned in Germany, confirm this view, which receives further confirmation from a comparison of the small-pox deaths in the French and Prussian armies in the time of peace which immediately preceded the war. In 1869 there were 63 deaths from small-pox in the various French garrisons. In the four years from 1866 to 1869 there were 380 deaths from small-pox, 323 of them being from the active army. On the other hand, the total number of deaths from small-pox in the Prussian army from 1835 to 1869 was but 77."

The Relationship of Cow-pox and Small-pox.

This subject is not dealt with at great length by the Commission, the reason being that it is of opinion that the question of identity or non-identity of cow-pox and small-pox is of much less importance than the other question of the protection which cow-pox actually gives against small-pox. Having shortly referred to the experiments of Thiele, Ceely, Badcock, Voigt, Haccius and Eternod, King, Simpson, and Hime, the Commission arrives at a deliverance which is both interesting and valuable if, as may be assumed, it represents the Lord Chancellor's cautious verdict on the facts as at present known and set forth in evidence before the Commission. "Taking all the various facts into consideration we seem led to the provisional conclusion that under certain conditions the tissues of the cow are able to transform small-pox into vaccine, that these conditions may be such as to lead to the transformation being sudden and complete, that under certain other conditions the transformation may be gradual and incomplete, and that under certain other conditions—and these seem most commonly to obtain—the transformation into vaccine does not take place at all. But what the above conditions are has not as yet been clearly made out. It has been suggested that one condition favourable to the transformation is extreme youth of the subject; to effect the change the animal used should be a calf of not more than three or four months old, but this is not definitely proved." The most important part of this "provisional conclusion" is that small-pox really can be transformed into vaccine by the tissues of the cow. The Commission goes on to say: "The precise *modus operandi* by which a previous attack of a disease furnishes security against a subsequent attack by the same disease has not yet been elucidated. There can be no cause for astonishment, then, if we are unable to trace the steps by which vaccination exerts a protective influence, supposing the fact that it does so be established, nor is it essential that we should succeed in tracing them. Our inability to accomplish this does not seem to us to be the slightest reason for regarding

with doubt the conclusions to which the facts lead us." Regarding the use by Professor Crookshank of the term "antagonism" instead of "protection" the Report says:—"Professor Crookshank, than whom no one has more largely insisted on the theoretical arguments against the protective influence of vaccination in relation to small-pox, gives it as his opinion that vaccination creates a transient antagonism to that disease. We understand his view to be that an attack of disease can only afford protection against the same disease and that small-pox and cow-pox are not the same but different diseases. We gather, however, that in his opinion so long as the state of antagonism lasts the person in whose system it exists is less likely to suffer from small-pox than he would be if the state of antagonism were wanting. This seems to us to amount in effect to the same thing as saying that during that period vaccination has conferred some protection. Whether the effect be to create antagonism or to confer protection, and whatever difference there may be between the *modus operandi* in the one case and in the other, we know equally little about it. If a condition of transient antagonism to small-pox is induced by vaccination, theoretical considerations will not afford a guide of the slightest value to the conclusion how long this transient antagonism will last or how soon it will pass away. Experience, and experience alone, can answer that question. *A priori* we do not see that there is any better reason for supposing that it would last for two or three years than that its duration would extend to ten years." The final paragraph dealing with this subject of the relationship of small-pox and cow-pox is as follows:—"If an impartial study of the facts led to the conclusion that small-pox treats the vaccinated and unvaccinated alike, this would throw, no doubt, an interesting light on the theories which have been advanced. If it leads to the contrary conclusion, then any theory inconsistent with it, especially any theory based upon hypotheses drawn from those obscure regions which science has not yet completely illuminated, may safely and wisely be disregarded."

There next follows a summary of all the evidence already adduced, that vaccination protects against small-pox, but it would be of little use further to summarise the summary.

The Objections Made to Vaccination.

The subject of the injurious effects alleged to result from vaccination is treated of in a long and interesting dissertation. It is pointed out that everything depends on the extent and character of the risks and that even chloroform is constantly resorted to in order to escape temporary pain, though it cannot be denied that risk always attaches to its administration. Dealing with general statistics of alleged injury a paragraph is devoted to the Parliamentary returns obtained by Mr. Hopwood, Q.C., which have been so much relied on by opponents of vaccination, and in the paragraph the returns are very well disposed of. With regard to syphilis it is shown that the disease is most largely fatal in the first three months of life, or before vaccination is performed, and that in Scotland, where the age of compulsory vaccination is six months, while the syphilis deaths at 0 to 6 months (the period preceding vaccination) have considerably increased, the proportion at the age 6 to 12 months (the period succeeding vaccination) has remained stationary; while in Ireland it appears that the number of deaths from syphilis has largely diminished in recent years. It is no doubt true that syphilis has increased say between the two periods, 1863-1867 and 1883-1887, but the Commission points out that whereas in England and Wales with vaccination generally enforced the increase in the infant mortality from syphilis was 24·7 per cent., in Leicester, where vaccination has been neglected, the increase was no less than 69·3 per cent. This comparison is not vitiated by the fact that while Leicester has an urban population, England and Wales include a large rural population. As between 1863-1867 and 1883-1887 Leicester is compared with Leicester, and England with England, so that the comparison is fair for both.

With regard to cancer, the Commission concludes:—"It may be that, in addition to the apparent increase, there has been some real increase in the mortality from cancer, but there is not a shadow of evidence to connect this with the practice of vaccination, whilst there is ..... evidence pointing the other way." In erysipelas Leicester again yields an interesting comparison. In the two periods already mentioned the infant mortality from erysipelas in England and Wales *decreased* by 16·7 per cent., whilst in Leicester, with neglected vaccination, there was an *increase* of 41·5 per cent. In tabes mesenterica and scrofula the increase in England and Wales and in Leicester is almost identical, being 26·8 per cent. for the former and 25·8 for the latter.

Passing from general statistics to evidence that personal injury or death has resulted from vaccination the Commission states that in the period 1881-1889 there were in England and Wales 6,739,902 primary vaccinations and that 476 deaths were certified as "connected with"—not necessarily due to—vaccination, and that in Scotland in 1883-1890 the corresponding figures were 855,185 and 22. Regarding non-fatal diseases supervening on vaccination a judgment is endeavoured to be based on the cases to which the attention of the Commissioners was called during the seven years. They point out that the "inquiry has been thoroughly well known, and that active organisations and zealous individuals were at work, searching out cases in which the resulting vaccination had been abnormal, with the view to bring them under our notice."

The conclusion of the whole subject is given as follows. "A careful examination of the facts which have been brought under our notice has enabled us to arrive at the conclusion that, although some of the dangers said to attend vaccination are undoubtedly real and not inconsiderable in gross amount, yet when considered in relation to the extent of vaccination work done they are insignificant. There is reason further to believe that they are diminishing under the better precautions of the present day, and with the addition of the further precautions which experience suggests will do so still more in the future."

The next subject discussed is the means "for preventing or lessening the ill-effects, if any, resulting from vaccination"; but that has already been referred to in an earlier article dealing with the proposals of the Commission regarding administration and legislation. The question "As to what means other than vaccination can be used for diminishing the prevalence of small-pox; and how far such means could be relied on in place of vaccination" resolves itself into a consideration of hospital isolation as a check on the spread of small-pox; but this also has been referred to in an earlier article.

This brings us to the end of our review of the Report of the Royal Commission. Some interesting points have had to be altogether passed over and others have been no more than glanced at, but as to these we can only repeat our advice that every member of the profession should purchase the volume, and after having made himself acquainted with the Statement of the two dissentients, should carefully peruse the Report of the Commission itself. Once more we have to point out that the omission to recommend re-vaccination as an administrative duty constitutes the one great flaw in the very valuable deliverance of the Commissioners. The want of re-vaccination is serious enough in this country at present, but it will become still more serious if the system of domiciliary vaccination recommended by the Commission receives legislative sanction. With all the advantages which we have already referred to as belonging to home vaccination as distinguished from stational vaccination, there is the disadvantage which we have also pointed out—namely, that if every practitioner becomes a public vaccinator, then, owing to lessened individual experience in performing the operation, the average of "insertion success" will be diminished. This diminution will tend to show itself in an earlier return of susceptibility to attack by small-pox, and there will, therefore, be all the more need for a renewal of the protection by means of re-vaccination. This is the fact which should most of all receive the attention of the medical profession, and when the subject of vaccination comes in practical shape before Parliament the profession ought to make its voice heard in no uncertain way on this particular point. It is for the legislature and not for the medical profession to decide exactly how much of compulsion should remain on the Statute Book, but whatever compulsion remains with regard to primary vaccination should now for the first time in the history of this country be enacted with regard to re-vaccination. Then, and only then, will the vaccinal protection of the United Kingdom against small-pox be logically complete, even if it be not universally enforced.

FOOTBALL CASUALTY.—At South Shields, a youth, while recently playing a match, received an injury to his ankle, from the effects of which he died last week.

THE BATTLE OF THE CLUBS.

STOCKPORT AND DISTRICT MEDICAL SOCIETY.

A SPECIAL meeting of the medical profession was held on Dec. 3rd, under the auspices of the above society. The meeting was called to "consider certain offers of various clubs" and was well attended. Mr. HOUSMAN (vice-president) occupied the chair in the unavoidable absence of the President (Dr. Marriott). The Chairman in introducing the subject said now that the clubs found that they would be without medical officers at the end of the year they were trying to approach the medical men of the town. The profession were bound by the scheme which they had signed in January last. Under this scheme the following rules had been adopted:—

1. Minimum payment (men only), 4*s.* 4*d.* per annum, on all who have been in benefit during the year, and resident within two miles of the club-house.
2. Members to attend at fixed hours when able. Messages for patients to be seen at their homes must be left before 9 A.M. Only urgent cases seen on Sundays.
3. Night visits and special visits after 9 A.M. *may* be charged for as private visits.
4. Medical attendance to mean advice and ordinary medical and surgical attendance, exclusive of fractures, dislocations, and severe injuries and all operations beyond opening superficial abscesses.
5. Venereal diseases excluded.
6. Medicine bottles to be provided by patients or paid for.
7. Termination of appointment to be three months' notice on either side.
8. Members with incomes of over £100 per annum or occupying houses of £29 rental and over not to be included in medical benefits.
9. A fee of 2*s.* 6*d.* to be paid for examination of any candidate for admission to a club.

The question now was whether the scheme should be modified or whether it should be adhered to as it stood. Certain clubs had offered to pay the 4*s.* 4*d.* per annum if all the other items of the scheme (eight in number) were abandoned, and it was desirable to know what the profession thought. The great stumbling-blocks with the clubs were the wage limit and the examination fee, and he thought the former might be removed by not making the wage limit retrospective, that is, only to apply it to members joining after Jan. 1st, 1897.

Mr. ROGERS said a club of 300 members had offered him 4*s.* 4*d.* a year if all the other items were allowed to fall through; he wished to know the feeling of the other men, and he was prepared to do just as the profession wished.

After a lengthy discussion, in which most members took part, Dr. ROGERSON moved that "the scheme be adhered to as it stands." He said the scheme was a reasonable one and to alter it would show weakness and want of backbone on the part of the medical men.

Dr. SEVILLE seconded the motion.

Mr. J. H. O. GOULDEN moved as an amendment that Clause 8 of the scheme should read: "All persons who are on Dec. 31st, 1896, already benefit members shall be entitled to their medical benefit provided through their clubs during the continuance of their membership irrespective of their pecuniary position. All members joining after Jan. 1st, 1897, shall receive medical benefit as if by an annual contract between such benefit member and the medical officer, the medical officer having the power to terminate the contract on account of the pecuniary circumstances of any member—viz., being in receipt of more than £2 per week—at the end of any year by giving notice in writing to that effect to the club secretary before the end of the year. The individual members on their part may cease contributing at the end of any quarter, such cessation to be notified to the medical officer." Also that Clause 9 should read, "No examination fee to be charged to candidates for admission to medical benefit, but that 2*s.* 6*d.* be charged for examinations to sick benefit only."

Mr. ROGERS seconded, and on the amendment being put 5 voted for and 9 against the motion.

The original resolution was then put and carried, 9 voting for and 5 against it.

A vote of thanks to the chairman terminated the proceedings.

THE POSITION AT YARMOUTH AND GORLESTON.

We have been requested by Mr. G. Wilberforce, P.P.G.M., Notts Order, Station-road, Beeston, Notts, to insert this communication:—

"I enclose announcement of success at Gt Yarmouth where a gentleman has been selected from hundreds who applied for the situation including M.d. and F.R.C.P's and even three professors. You will also be suprised to learn that a most highly qualified gentleman has been appointed as dispenser with a proper medical degree. In a few months the town will be catered for on more reasonable terms than Nottingham or Norwich orders or even Foresters could secure from local medicals, against whom there is no ill feeling whatever as stated by you in the remarks on the above question in your paper of the 19th inst. I have been one of the promoters of two Institutions and have found most cordial relations exist between doctors and Committee and as long as the former do their duty they have nothing to fear from us but on the contrary good treatment and fair dealing. Our Institutions now have a register of men so that any case of insubordination or inefficiency or negelct on their part is very easily remedied. This happily rarely occurs as we pay them well and by treating them well we get better medicine and attendance than under the old system where we had to wait till the private patient was seen first regardless of the seriousness of the case.

"I hope to see these Institutions very general as I believe the friendlies only shall cater for the publick. I find that 3 active men and 2 dispensers can cater for 15,000 and at 4/- per head this means £3000 per ann. We can save 800 per ann out of this and the surplus in two years will either build a grand premise or can be put to the benefit of the members. From this you will see what a grand thing Coperation is for where only one or two suffer many benefit thereby.

"I hope we shall be able to give employment to feameles to attend the ladys who naturally prefer a woman to attend private disorders. If our servants do their duty we can afford to make the job worth their while to stay and be loyal and true to us.

"I am Sir

"Yours truly

"SHEPPERD AND FORRESTER."

The authors have the subject near at heart, for they write on the envelope: "We hope every district in London will have An Institution in less than 3 years." We do indeed see what a grand thing "Coperation" is when the noble profession of medicine is expected to be at the beck and call of institutions with educated and liberal-minded promoters of the sort represented by "Shepperd" and "Forrester" at their head. But lest "Shepperd" and "Forrester," whether gentlemen or "ladys," should get all the benefit, and the medical profession, whether males or "feameles," endure all the suffering, we advise the medical profession to be the ones to "coperate." To continue employing the elegant language of "Shepperd" and "Forrester," no job can ever make it worth the while of members of the profession to remain the servants of such masters, even if their qualification to practise should bear the comical title of M.d.

PHLORIDZIN DIABETES.

IN a recent communication to the Physiological Society Dr. Pavy[1] entered into the subject of phloridzin diabetes and related experiments bearing on a debatable point. Since von Mering, he said, in 1888 showed that phloridzin could produce glycosuria many experiments had been made with the expectation that they might throw light on the pathology of diabetes. Phloridzin was a crystallisable glucoside obtainable from the bark of the stem and root of the cherry and some other rosaceous trees. That the sugar excreted by the urine after its administration was not derived from the glucose of its molecule was, however, clearly established by two facts, either of which would be sufficient: (1) that the quantity of sugar passed in the urine is far greater than the total amount of phloridzin administered; and (2) the complementary part—phloretin—left after the sugar is removed from the glucoside produces glycosuria. Phloridzin, it was to be remarked, produces a very severe form of glycosuria, the quantity of sugar in the urine being 40 to 50, or 80, or even over 100 per 1000.

Phloridzin causes glycosuria whether administered by the mouth or by subcutaneous or by intra-venous injection. When given by the mouth the glycosuria lasts until the next or even until the third day. When administered by subcutaneous injection the effect is produced more quickly but ceases sooner, the glycosuria frequently being found to have passed away by the next day. This more rapid disappearance of sugar from the urine after subcutaneous injection was a point of importance in interpreting the results of experiments. On the strength of certain experiments by von Mering it had been asserted that phloridzin produces glycosuria without glycohæmia—sugar in the urine without an increase of sugar in the blood. In three experiments made by von Mering the estimate of the amount of sugar in the blood brought it within the normal range.

[1] Proceedings of the Physiological Society, Nov. 14th, 1896.

It was pointed out that von Mering made use of a mode of analysis attended with the employment of a large quantity (two litres) of water. Coagulation was effected by heat, and after filtration the filtrate had to be evaporated down to a small bulk before the sugar was estimated by Fehling's solution. In another recent communication to the Physiological Society Dr. Pavy showed that a very large loss was liable to occur when a solution of sugar is subjected to prolonged ebullition. In one experiment in which .0 595 gramme of sugar from honey was simply boiled in a flask with a litre of water for twelve hours the loss amounted to 54 per cent. In another experiment with sugar from diabetic urine the loss was 57 per cent. Again, it was important in order to ensure that all the sugar shall be extracted to get a coagulum which can be readily and effectively washed. Both requirements are fulfilled by the alcohol process.[2] The experimenter must be alive to the fallacies which lurk in the analytical methods. If he be properly on his guard against these very accurate results might be obtained. Thus in a series of experiments brought to the notice of the society sugar was added in known quantity to blood and afterwards estimated. The error never exceeded 5·5 per cent. and was usually much less. In addition to the fallacies connected with the mode of analysis there were others connected with the circumstances as regards the state of the animal at the time of collection and the manner in which the collection was made which must be guarded against. Both chloroform and ether led to the presence of an abnormally large amount of sugar in the blood. This, unless taken into account, would form a seriously vitiating factor. Speaking of some experiments of Levène on phloridzin glycosuria it was pointed out[3] that he had neglected to give consideration to this source of fallacy and that he had also delayed taking the blood supposed to be under the influence of the subcutaneous injection of phloridzin till the following day, when the opportunity was given for the effect of the drug to have passed away. Guarding against the various sources of fallacy enumerated, Dr. Pavy, experimenting on the cat, subcutaneously injected 0·5 gramme of phloridzin and examined the blood and urine taken at times of killing from one to five hours afterwards. The table of results placed before the society showed that sugar was found to be present in abnormal amount in the blood, and that, therefore, it was not correct to say that there is no glycohæmia in connexion with phloridzin glycosuria. As in other cases where sugar is found in increased amount in the blood the amylose carbohydrate obtainable from the blood-coagulum presented itself in notably larger quantity than usual.

THE NEW OPERATING THEATRES AT ST. GEORGE'S HOSPITAL.

ON Wednesday morning last the new operating theatres and chloroform rooms at St. George's Hospital were opened by His Royal Highness the Duke of Cambridge. The proceedings were of an informal character. The Duke of Cambridge was attended by General Bateson and General the Earl of Chelmsford and was conducted to the new theatres by Mr. T. Pickering Pick (the senior surgeon of the hospital), Mr. H. Percy Adams (the architect), and the surgical staff of the hospital. Mr. Pick showed His Royal Highness the various improvements and explained briefly their uses and advantages. Having expressed his approval and admiration of the new arrangements the Duke of Cambridge formally declared the theatres and their appurtenances open. He then turned to the assembled students and said that as an old governor of the hospital he took the highest interest in all their concerns. The many advances witnessed during Her Majesty's long reign had no more marked example than was furnished by advances in the science of healing, and whether we looked at home or abroad nothing would be more apparent than the great indebtedness of our generation to science. His Royal Highness exhorted his hearers to carry out the instructions of their elders, assuring them that they "had a great pull" over the elder generation in that they had the work of the latter to build upon. Finally he expressed himself delighted to have had the opportunity of making those few remarks and of seeing the useful adjunct to the work of the hospital which had just been completed.

The new theatres are excellent specimens of modern sanitary architecture. The walls and ceilings throughout are lined with glazed tiles and every angle is rounded so that the whole suite can be washed with a fire hose. The floors are of white marble mosaic, and the benches are entirely composed of white Sicilian marble polished on the vertical faces. The lighting of the theatres even on so dull a day as Wednesday last was all that could be desired. The ventilation has been carefully attended to, for the whole of the air in the theatres can be changed once in six minutes.

[2] Proceedings of the Royal Society, vol. xxxii., 1881, p. 418.
[3] Journal of Physiology, vol. xvii., p. 259.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6434 births and 3789 deaths were registered during the week ending Dec. 19th. The annual rate of mortality in these towns, which had been 19·4 and 18·9 per 1000 in the two preceding weeks, further declined last week to 18·2. In London the rate was 17·2 per 1000, while it averaged 18·9 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Derby, 13·8 in Halifax; 14·3 in Birkenhead, and 14·6 in West Ham; the highest rates were 21·8 in Birmingham, 23·3 in Swansea and in Oldham, 23·5 in Liverpool, and 24·8 in Plymouth. The 3789 deaths included 356 which were referred to the principal zymotic diseases, against 364 and 350 in the two preceding weeks; of these, 86 resulted from diphtheria, 77 from measles, 73 from whooping-cough, 55 from scarlet fever, 39 from "fever" (principally enteric), and 26 from diarrhœa. The lowest death-rates from these diseases were recorded in Plymouth, Wolverhampton, Halifax, and Sheffield; and the highest rates in Newcastle-upon-Tyne, Salford, Bradford, and Nottingham. The greatest mortality from measles occurred in Cardiff, Gateshead, Newcastle-upon-Tyne, Bradford, and Nottingham; from scarlet fever in Leicester and Birkenhead; and from whooping-cough in Birkenhead, Burnley, Huddersfield, Bristol, Nottingham, and Swansea. The mortality from "fever" showed no marked excess in any of the large towns. The 86 deaths from diphtheria included 58 in London, 3 in West Ham, 3 in Birmingham, and 3 in Hull. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were no small-pox cases under treatment in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last, the 19th inst., and no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 3868, against numbers declining from 4164 to 3971 on the eight preceding Saturdays; 291 new cases were admitted during the week, against 333, 350, and 353 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the five preceding weeks from 492 to 346, further fell last week to 302, and were 193 below the corrected average. The causes of 76, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bradford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·4 and 20·7 per 1000 in the two preceding weeks, further rose to 21·0 during the week ending Dec. 19th, and was 2·8 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·5 in Greenock and 16·8 in Aberdeen to 23·5 in Glasgow, and 25·6 in Perth. The 614 deaths in these towns included 54 which were referred to measles, 16 to diarrhœa, 7 to diphtheria, 7 to whooping-cough, 6 to "fever," and 5 to scarlet fever. In all, 95 deaths resulted from these principal

zymotic diseases, against 79 and 68 in the two preceding weeks. These 95 deaths were equal to an annual rate of 3·3 per 1000, which exceeded by 1·6 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 40 and 37 in the two preceding weeks, rose again to 54 last week, of which 45 occurred in Glasgow and 5 in Paisley. The 7 deaths from whooping-cough were within 2 of the number in the preceding week, and included 5 in Glasgow. The fatal cases of diphtheria, which had been 9 and 2 in the two preceding weeks, declined to 7 last week, of which 5 occurred in Glasgow. The 6 deaths referred to different forms of "fever" exceeded the number recorded in any recent week, and included 4 in Glasgow, where 2 of the 5 fatal cases of scarlet fever were also registered. The deaths from diseases of the respiratory organs in these towns, which had been 147 and 170 in the two preceding weeks, declined to 121 last week, but exceeded by 18 the number in the corresponding period of last year. The causes of 31, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 31·6 to 25·8 per 1000, rose again to 27·3 during the week ending Dec. 19th. During the past twelve weeks of the current quarter the death-rate in the city has averaged 26·3 per 1000, the rate during the same period being 18·1 in London and 17·4 in Edinburgh. The 183 deaths registered in Dublin during the week under notice showed an increase of 10 upon the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 16 and 21 in the two preceding weeks; of these, 12 resulted from whooping-cough, 5 from scarlet fever, 3 from "fever," 1 from diphtheria, and not one either from small-pox, measles, or diarrhœa. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 1·6 in London and 1·1 in Edinburgh. The fatal cases of whooping-cough, which had been 7 and 4 in the two preceding weeks, rose gain to 12 last week. The deaths from scarlet fever, which had been 5, 4, and 10 in the three preceding weeks, declined to 5 last week. The deaths referred to different forms of "fever," which had been 5 and 2 in the two preceding weeks, were 3 last week. The 183 deaths registered in Dublin last week included 35 of infants under one year of age, and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Nine inquest cases and 4 deaths from violence were registered; and 52, or more than one-fourth, of the deaths occurred in public institutions. The causes of 11, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

INDIA AND THE INDIAN MEDICAL SERVICES.

SURGEON-CAPTAIN T. D. C. BARRY, to be Captain, Bombay Volunteer Rifle Corps. Surgeon-Major J. L. Poynder is confirmed as Civil Surgeon, Raipur. Surgeon-Captain W. D. Sutherland, Civil Surgeon, Damoh, is transferred to the Sambalpur District. Surgeon-Captain J. R. Roberts (Bengal), Officiating Medical Officer, 2nd Regiment, Central India Horse, is transferred in the same capacity to the 1st Regiment.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet-Surgeon John Dudley to Yarmouth Hospital. Staff-Surgeons: John D. Henwood to the *Empress of India*, and Samuel W. Johnson to the *Devastation*. Surgeons: R. Hill to the *President* for study at a metropolitan hospital; F. W. Sterricker to the *Amphion*; and J. F. Hall to the *Royal Sovereign*. Surgeons and Agents: John E. O. Ryan at Ardmore, and J. Livingstone, M.D., at Barry and Cadoxton.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. Macdonald, the Queen's Rifle Volunteer Brigade, to be Surgeon-Lieutenant.

THE LEE-METFORD BULLET.

It is pretty well known that our troops in the Chitral campaign were not altogether satisfied with the "stopping power" of the Lee-Metford bullet. This has led to a number of experiments, and a new bullet has now been devised in India for the Lee-Metford rifle which is stated to be admirably adapted to its purpose. Experimental trials have been made with it on an extensive scale at Meerut and elsewhere in the presence of a large number of officers, troops, and medical officers with most satisfactory results. The new bullet, while requiring no increase of calibre in the rifle or alteration in the charge of powder, retains the present range and makes excellent shooting and inflicts the desired "stopping wound." It is the invention of Captain Bertie-Clay, R.A., superintendent of the Dum Dum ammunition factory. Colonel Hill, in the course of a lecture to the troops at Meerut, said as the result of his personal experience that the Lee-Metford rifle with the new bullet was the most perfect weapon in existence.

THE LATE SURGEON-MAJOR PARKE.

Lord Roberts on Saturday last, the 19th inst., performed the ceremony of unveiling the statue erected at Dublin to the late Surgeon-Major Parke of the Emin Pasha rescue expedition. The statue is erected on the Leinster lawn, in front of the Royal Dublin Society's Museum, close to the statue of the late Prince Consort.

Correspondence.

"Audi alteram partem."

"THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—Mr. Carter would, I venture to think, have been well advised if he had been content with the success of his friends without attempting to mutilate the defeated. His statements in the latter part of his letter to you amount to this:—that the authorities of the Defence Union put me forward as a candidate in order that the General Medical Council might be packed with a view to obtaining convictions more easily. Although a defeated candidate, this is not a charge which I choose to overlook.

The facts connected with my candidature are as follows: (1) In the spring of this year I received a letter from the secretary of the Defence Union asking me whether I would consent to come forward as a candidate for a seat upon the General Medical Council in conjunction with Dr. Glover; (2) I finally consented to do so; (3) I never met either Mr. Horsley or Dr. Bateman till the summer of 1895; (4) I do not know that I have a single personal friend upon the Council of the Defence Union; (5) I only became a member of the Union quite recently and I have never taken any part in its proceedings; (6) Mr. Horsley and Dr. Bateman certainly signed one of my nomination papers, but it was also numerously signed by some of the leading teachers in medicine, surgery, and pathology in the London schools, as well as by some of the most respectable and leading general practitioners in the country; and (7) I was also nominated by leading practitioners in Chester and Bolton.

It is absolutely a false suggestion, and, I may add, a gratuitously false suggestion, upon the part of Mr. Carter that the authorities of the Defence Union put me forward as a candidate with a view to packing the judicial bench, and Mr. Horsley himself will admit that I am not the sort of person to the led by the nose, even by himself. I consider it a very great honour to have been selected by Mr. Horsley and his friends and to have gained his confidence and, I may say, his friendship. I recognise as the greatest possible compliment the enmity of Mr. Carter and his friends. If the election has done nothing else it has drawn out Mr. Carter; and the members of our profession can now appraise at their proper value the qualification which licensing authorities think suitable in their representatives.

Perhaps you will permit me to express my sense of the honour conferred upon me by the many members of my profession who supported me and voted for me, notwithstanding

the virulent attacks of such men as Mr. Carter and his friends. I can assure your readers that I shall continue to work in the interests of progress in the educational and other matters connected with our great profession.

I am, Sirs, your obedient servant,

Hatfield, Herts, Dec. 20th, 1896. LOVELL DRAGE.

To the Editors of THE LANCET.

SIRS,—I would desire also to heartily thank the 1862 gentlemen who recorded their votes for me at the late election of the General Medical Council, and particularly to my over 900 pledged supporters, several of whom are eminent and well known in the profession; and many, too, have written me several letters evincing their earnestness in medical reform and their interest in, and good wishes for, my successful candidature. Allow me also to thank the Editors of THE LANCET for their publishing reports of my meetings, of my address, and the inserting of several letters in the columns of THE LANCET, as well as for their courtesy during my candidature. The election proved two things—its overcrowded ranks, the poverty of the greater numbers, and its apathy; but the apathy was, with few exceptions, that of the prosperous section, who appear thus indifferent to their poorer brethren.

I am, Sirs, yours faithfully,

Dec. 21st, 1896. FREDERICK ALDERSON, M.D.

To the Editors of THE LANCET.

SIRS,—Mr. Brudenell Carter thinks direct representation is a "farce"—and few will deny that as the General Medical Council is at present constituted he describes it correctly. What possible chance can *five* independent members have of maintaining the opinions of the profession against *twenty* representatives of the "schools"? That we should continue to allow ourselves to be so "governed by our schoolmasters" is truly a "farce"—degrading to our manhood and to our intelligence. Mr. Carter naturally explains the smallness of the poll in a manner which fits in with his own views. Much more probably is it due to (1) disgust at the ineptitude hitherto displayed by the ruling majority, and (2) to a recognition of the unfair conditions which our direct representatives have been called on to face. You, Sirs, mention "that each of the direct representatives has been appointed by a larger number of votes of the medical profession than any of the other members of the Council." This is, indeed, a surprising statement!

Mr. Carter thinks little of the 6646, 5369, and 4910 votes given respectively for our "directs"—Dr. Rentoul, Mr. Brown, and Dr Glover. He "thinks that none of our new 'representatives' (*sic*) can claim the *smallest* right to speak in the name of the profession!"

The obvious question which arises is, What is the number of the voters who gave Mr. Carter a seat on the Council? It must exceed the votes given for our "directs," otherwise he would have recalled, before writing, the adage concerning those who live in glass houses.

I am, Sirs, yours faithfully,

Uppermill, Saddleworth, Dec. 21st, 1896. COLIN CAMPBELL.

To the Editors of THE LANCET.

SIRS,—No doubt you will afford me the opportunity to return my sincere thanks in the columns of THE LANCET to the 2760 electors who recorded their votes for me as a candidate for the General Medical Council. With the limited time at my disposal and under the difficult conditions of the contest a direct appeal to more than about 5000 or 6000 of the voters, many of whom had already promised their support to other candidates, was not practicable, and I have every reason to be gratified with the cordial response which I received. Moreover, it is satisfactory to know that the views and measures which I advocated commended themselves to a much larger number of electors than those who were able to vote for me, and of this there is a striking proof in the return at the head of the poll of the candidate whose opinions were most in accordance with my own.

The apathy and indifference to their electoral privileges of about 40 per cent. of the members of the profession are to be regretted, but they are not confined to the election to the General Medical Council. When appeals are made to the Fellows of the Royal College of Surgeons of England between 600 and 700 only respond out of nearly 1100 who could do so if they would; and at the present time there is a large number of Fellows who have not returned an answer to the circular sent out by the Council in regard to the important subject of the representation of the Members of the College on the Council. Perhaps Mr. Brudenell Carter would regard this as a proof that we ought to return to the old system of an irresponsible and self-elected collegiate council instead of endeavouring to enlist the interest of a still wider constituency in the affairs and prosperity of the College. At all events, it is premature to regard direct representation of the profession on the General Medical Council to be a failure because Dr. Rentoul and Mr. George Brown have been returned to the Council and stand first and second on the poll. Both are reformers of long standing and men of tried ability and experience, and I firmly believe that they will prove that the choice of the electorate was justified and very likely achieve results which will be a surprise to those who underrate their capacity. It rests with the electorate to afford them adequate support and their success would be assured.

I am, Sirs, yours truly,

Wimpole-street, W., Dec. 21st, 1896. WALTER RIVINGTON.

To the Editors of THE LANCET.

SIRS,—There is another very obvious explanation of the fact that some 9000 practitioners failed to vote at the recent election which Mr. Carter has apparently been unable to perceive. This is that the abstentions were due to a very prevalent feeling that the Council has done nothing in the past and cannot, while it takes its present limited view of its functions, do anything in the future for the benefit of the general practitioner. It is this feeling which, it is everywhere understood, caused the resignation of Mr. Wheelhouse and Sir Walter Foster. They saw in the words of Mr. Carter that "direct representation is a farce." And why is it a farce? Because the practitioners of this country are represented by such an infinitesimal minority on that body, which, as you truly say, ought to be "the central governing body of the profession," as to be unable in the slightest degree to influence its decisions. In 1886 the electors did not realise this and voted in good numbers; in 1891 they began to perceive it and the voting fell off; in 1896 many more of them finding that the existence of the Council under present conditions is of no earthly use to them declined to vote at all. If Mr. Carter thinks this state of affairs either creditable or satisfactory I beg to differ from him, and I venture to remind him that there are still 12,000 of his fellow practitioners who differ from him also.

I remain, Sirs, faithfully yours,

Putney, Dec. 21st, 1896. W. G. DICKINSON.

To the Editors of THE LANCET.

SIRS,—Will you give me space to intimate my heartiest thanks to my supporters in the late election and to assure my constituents of my constant readiness to attend to their individual and collective interests in the General Medical Council? I am, Sirs, yours faithfully,

Dec. 17th, 1896. WILLIAM BRUCE.

HEAVY FINE OF AN UNQUALIFIED PRACTITIONER: PROSECUTION OF B. W. DAVIES.

To the Editors of THE LANCET.

SIRS,—From your reference to the case of B. W. Davies in your issue of the 12th inst. your readers may be led to infer that the prosecution of this unqualified person was instituted by the collier Thomas Hulse. As a matter of fact, the prosecution was instituted by our clients, the Medical Defence Union, Limited, by whom the former prosecution of this man was also instituted, and Mr. Paine, the solicitor prosecuting, acted in each instance upon our instructions and as our agent.

We are, Sirs, yours obediently,

HEMPSONS,

Solicitors for the Medical Defence Union, Limited.

Dec. 14th, 1896.

"DR. LUNN'S MEDITERRANEAN GUIDE-BOOK."

To the Editors of THE LANCET.

SIRS,—Your reviewer has dealt rather mercilessly with me in his notice of the "Mediterranean Guide" which I have just edited and issued. I am not prepared to say that, as editor, I am not responsible for every line in the book, but I am sure that if I had noticed that in the section of Algiers, written by Mr. Reynolds Ball, any patent or secret remedies had been recommended I should certainly have excised the passage. The reference to the two medicines in question entirely escaped my notice and will, of course be deleted in future editions. I am, Sirs, yours faithfully,

Dec. 19th, 1896. HENRY S. LUNN, M.D.

INGUINAL ORCHECTOMY.

To the Editors of THE LANCET.

SIRS,—I read with much interest Dr. W. S. Handley's article upon an Inguinal Method of removing the Testicle. Varicocele is a condition which requires operative interference in a far larger number of cases than do affections of the testicle. I have for the past two years performed a perfectly analogous operation for the cure of varicocele the details of which were communicated to me by Mr. A. Boyce Barrow, surgeon to King's College Hospital. The operation has been successful in every case, and the boys have passed into the navy after they had been refused for their condition. The advantages of this method over others are: (1) the great ease with which the veins are examined, dissected out, and removed; (2) avoidance of wounding the scrotum; (3) absence of after-swelling at the seat of ligature; (4) greater facility in applying antiseptic dressings; and (5) absence of an easily discernible scar. The details of the operation are as follows. The incision, two inches long, is made over the external abdominal ring through the skin, fascia, intercolumnar fascia, cremasteric and fascia transversalis. The cord is then evident with the enlarged veins and the dissection is facilitated by feeling for, and picking up, the cord after cutting through the intercolumnar fascia. The vein or veins are now well cleared as they go into the external abdominal ring, pulled down a little, and ligatured as high as possible, a pair of Spencer Wells's forceps are placed on the veins below the ligature, and the veins cut through between. Holding up the forceps it is easy to strip all the coverings from the veins as low as the testicle, the testicle being even brought out of the wound. Another ligature is applied just above the testicle, care being taken not to include the vas deferens. The veins are cut away and the testicle is returned. The wound is stitched up and dressed, the testicle being well supported.

I am, Sirs, yours truly,

ROBERT FENNER, L.R.C.P. Edin.,

Cromer, Dec. 16th, 1896. Surgeon to the Cromer Cottage Hospital.

To the Editors of THE LANCET.

SIRS,—I can highly recommend the inguinal method of orchectomy as described by Dr. Handley in THE LANCET of Dec. 12th. I have used this incision in many cases, not only of castration, but in all operations on the contents of the scrotum. I invariably employ it in the operations for strangulated hernia and for the radical cure of hernia, and I have never had any difficulty in pushing the contents of the scrotum upwards through the wound and dealing with them as required. The incision is equally valuable in operations for hydrocele and varicocele. Kocher, who first described this incision in his book on Operative Surgery (English translation by H. Stiles), points out how far superior it is to a scrotal incision, as the scrotum is difficult to clean and very apt to become œdematous. I have often used this incision in children, where I found it very useful as it could be sealed up with a strip of gauze and collodium after careful closure by a continuous suture, and would then hardly be disturbed by the dribbling of urine as it is both removed from the urine and better guarded against it.

I am, Sirs, yours faithfully,

T. P. ZUM BUSCH,

Honorary Assistant Surgeon,

Finsbury-square, E.C. German Hospital.

THE NEW SYDENHAM SOCIETY'S MEDICAL LEXICON.

To the Editors of THE LANCET.

SIRS,—May I ask you to call attention in your columns to this publication. There can be no doubt as to the great value of the work so far as it has gone; but is it not a matter of great regret that the method of publication adopted by the New Sydenham Society should be such as to seriously injure the usefulness of the Lexicon as such? In these days of rapid and important progress that a dictionary which professes to be a guide in the use of scientific and technical terms should take *seventeen years* to reach to the letter P is most certainly anomalous; and when we consider that the first number was issued in 1879 it is obvious that a large volume of addenda will be necessary to bring the book up to the date of its completion whenever that may be. The present rate of publishing is about a letter a year, so we may expect that Z will be reached about ten years hence (1906). Possibly a few remarks from you may attract the attention of the society to this very sluggish progress and may stimulate it to better deeds in the future.

I am, Sirs, yours faithfully,

Hillwood, Hendon, Dec. 22nd, 1896. W. HENRY KESTEVEN.

BEATTY *v.* CULLINGWORTH.

To the Editors of THE LANCET.

SIRS,—Will you allow us to publish a final list of subscriptions to the Cullingworth fund? The list will now be closed until the publication of the balance-sheet.

We are, Sirs, yours, &c.,

T. D. ACLAND, } Hon.
B. PITTS, } Secs.

Dec. 22nd, 1896.

	£	s.	d.
Mr. Waren Tay	1	1	0
Dr. Hobhouse, Brighton..	1	1	0
Dr. Palmer, East Sheen..	1	1	0
Dr. Hitchcock, Bournemouth	1	1	0
Dr. W. R. Dakin	3	3	0
Dr. Heywood Smith ...	1	1	0
Dr. T. D. Griffiths, Swansea	1	1	0
Dr. E. S. Tait	1	1	0
Mr. J. H. Ewart, Eastbourne	5	5	0
Professor L. Armand Ruffer, Cairo	1	1	0
Mr. Blease Altrincham, additional (per Dr. Lloyd Roberts)	1	1	0
Professor Struthers, Edinburgh	1	1	0
Old pupils at St. Thomas Hospital, second list (per Dr. Harold Low):— Dr. H. Bristowe, Mr. G. Candler, Dr. F. Fawssett, Mr. F. W. J. Goodhue, Mr. C. Hodgson, Dr. Louis Jenner, Mr. A. R. O. Milton, Mr. J. G. Turner, Dr. W. B. Winston, Mr. E. H. Crisp, Mr. T. A. B. Plowman, and Dr. H. Simpson....	9	12	0

"ALLEGED ARSENICAL POISONING."

To the Editors of THE LANCET.

SIRS,—I have read with interest your annotation on the case in which a firm of drapers was sued for selling linette containing arsenic, the dust of which when inhaled was alleged to have caused serious injury to the health of the purchaser. I have seen no other report of the trial than that contained in THE LANCET, which, I take it, is correct. In the first place I am struck by the fact that Mr. Bernard Dyer stated that the fabric contained $\frac{1}{100}$th of a grain to the square foot—that is, $\frac{1}{10}$th of a grain to the square yard—whilst Dr. Stevenson found only $\frac{1}{1000}$th of a grain in the square yard. There is a certain margin of error in all chemical investigations, especially when dealing with minute quantities, but the discrepancy in this case is so great that I cannot help wondering if by some chance these two experts were not investigating different samples of the material. Then I note that Dr. Stevenson is reported to have said that the most delicate test for arsenic would not reveal its presence unless half a square yard were operated on. I take it that the expression "half a square yard" is correct and that it does not mean half a yard square. Half a square yard would be equivalent to $\frac{1}{2000}$th of a grain or over $\frac{1}{2}\frac{1}{0}$th of a grain, whilst half a yard square would equal $\frac{1}{4000}$th of a grain or over $\frac{1}{400}$th of a grain. I have recently made a series of experiments with Dr. Wilson Hoke on the presence of arsenic in the coloured wrappers of cigarettes and I am surprised to hear that any difficulty is experienced in detecting arsenic in quantities of $\frac{1}{2000}$th of a grain or even or $\frac{1}{400}$th of a grain. I have no desire to intrude my own experience, but will quote Dr. Luff

who was Dr. Stevenson's colleague in this case. Dr. Luff is the author of an admirable text-book on Forensic Medicine and Toxicology published only last year. On page 174 of vol. i. of the work, speaking of Marsh's test, he says: "By this test it is possible to very readily detect $\frac{1}{50000}$th of a grain of arsenic and even $\frac{1}{500000}$th of a grain produces a distinct stain." On page 176 he gives a figure of "arsenic crystals obtained by Reinsch's test from gr. $\frac{1}{1000}$ of arsenic." It is hardly conceivable that two experts such as Mr. Bernard Dyer and Dr. Stevenson if dealing with the same material could arrive at such widely different conclusions, and it is equally difficult to understand why Dr. Stevenson should find it impossible by his tests to detect $\frac{1}{10}$th of a grain if his fellow experts on the same side can obtain a characteristic reaction with $\frac{1}{50000}$th of a grain. I might point out the absurdity of regarding the British Pharmacopœia as an authority on doses and of supposing that the dose taken by the stomach is of necessity identical with the dose inhaled, but for the moment I confine myself to the chemical aspect of the question.

I am, Sirs, yours faithfully,

Welbeck-street, W., Dec. 21st, 1896. WILLIAM MURRELL.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Royal Infirmary.

THE special meeting of the trustees of the Manchester Royal Infirmary was held on the 14th inst., Lord Derby presiding. A resolution sanctioning the rebuilding of the Infirmary on the present site was met by an amendment to the effect that "it is not desirable at the present time to extend the ground area of the existing infirmary building." The numbers for and against appeared so evenly divided that the chairman in the end accepted a motion for a poll of the whole body of trustees. The voting papers must be sent in by to-day, but the result will not yet be known. It is acknowledged by all that, whatever is done, there must be a central hospital for emergencies and out-patients, but objection is taken, chiefly perhaps by those trustees who are members of the corporation, against any encroachment on the unoccupied space round the present building. Over this space the corporation claim some rights—more or less shadowy—which are denied by the infirmary authorities, and at the meeting Alderman Clay, chairman of the improvement committee, went so far as to threaten that the corporation "would stop the infirmary authorities from going forward with their scheme" and would adopt a "building line" which would prevent any extension. This statement was not well received, savouring too much of tyrannical exercise of power. Mr. Herbert Philips writes that, though he voted for the amendment, he felt "ashamed of the way in which the question had been presented on behalf of the City Council." He did not think it had any reason to be proud of the part it had taken in the matter during the last half century. Nor did he admire the diplomacy—scarcely to be distinguished in his opinion from sharp practice—by which it had "sought to keep open that valuable space at the expense of the charitable institution to which it belongs" Whatever the result of the poll may be it will be a misfortune if any step is taken rashly. The idea seems to be spreading that if the corporation wants the open space it should pay for it, and even Alderman Clay, who has been the most outspoken of the corporation advocates, has a scheme, since made public, which would give better terms to the infirmary than were foreshadowed at the meeting on the 14th. He would have the infirmary land and the present building transferred to the corporation and convert the main structure into a reference library or art gallery, or both, and would provide a site for the infirmary of about 15,000 square yards—7000 only being required for the proposed new buildings—in some central position fronting one of the main thoroughfares of the city, and convey it to the infirmary free of cost. He would find the money by selling the old Town-hall—now the Free Reference Library—or the Royal Institution in Mosley-street, now called the Art Gallery. Or as an alternative, the corporation, out of the proceeds of these sales, should provide a plot of land in the city for a receiving hospital, &c., and another of about forty acres in Fallowfield for the principal hospital. Many are the suggestions made, and much space is occupied in the papers by advocacy and criticism of one scheme or another. It is obvious that Alderman Clay's second plan would destroy the value of the infirmary for clinical purposes, and ought not to be entertained. Putting aside all sentiment as to removing the infirmary from the site it has so long held with honour, there is much to be said in favour of an emergency hospital and out-patient department in the city, as near as possible to the present infirmary, and a general hospital as near as may be to the Owens College, though not necessarily on the Stanley Grove site. Indeed it might be well, in view of possible complications, not as yet perhaps thought of, to choose another situation, so that though mutually interested in each other's welfare they could work in concert and harmony while retaining their independence. Though removal to the neighbourhood of the college would not secure immunity from occasional fog, still it may be, as Dr. Leech says, less pungent and irritating there than in the centre of the city, and anyone who has seen the discomfort and even distress of patients suffering from chest diseases in the present building during a Manchester fog would be only too glad for such suffering to be lessened or avoided. With the increasing use of gas-engines and hydraulic power the smoke nuisance ought to diminish in the centre of the city, but the time has not yet arrived. It is curious that the corporation, while so eagerly anxious to secure the infirmary precincts as an open space for the benefit of the people, should not be more energetic in preventing the pollution of the air by smoke and noxious vapours, which is certainly not beneficial either to the people or to the miserable, struggling vegetation which, with great care and coaxing, is kept alive for a time in what used to be called the infirmary gardens. In the old days they are said to have been worthy of the name, and the children of the neighbouring residents were sent there "to take the air."

Dec. 21st.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The General Medical Council and Unqualified Assistants.

Two well-known medical practitioners in the county of Durham have lately been cited before the General Medical Council for employing unqualified assistants and have undertaken to discontinue so to do. This has been done with the view of discouraging unqualified practice; but what is the result? The unqualified men will cease to be connected with qualified men and will simply continue to practise, making for themselves considerably larger incomes than they received before. There are men in Durham and Northumberland who have been in practice on their own account without any medical qualification for years. Why are these men not stopped? Is it that there is no legal method of doing so? If so, it is high time that power were obtained, for such men certainly do immense harm to the public and to the profession.

Honorary Assistant Physicians at the Royal Infirmary, Newcastle-upon-Tyne.

It has been determined to appoint two honorary assistant physicians to the Royal Infirmary, Newcastle-upon-Tyne. It is singular that hitherto, although the institution has had four surgeons and two assistant surgeons, the medical work has been done by four physicians unassisted.

The New Infirmary, Newcastle-upon-Tyne.

The fund for the re-building of the Royal Infirmary has already reached the handsome amount of nearly £80,000. The miners of Northumberland contribute £5000, those of Durham £2000, and the contributions of the working classes generally in the northern counties have been most liberal, showing in the most convincing way the estimation in which the institution is held by those who have most occasion to use it. Mr. Riley Lord, the late Mayor of Newcastle, to whom the credit of inaugurating the movement for re-building the infirmary is due, may well be proud of the generous response which has been made to his appeal. The site question is still unsettled. The governors having failed in their efforts to obtain from the corporation another suitable site or any addition to the present site have sought the aid of Mr. Waterhouse, asking him if it is possible to build a new infirmary

on the present site to hold 400 beds and at the same time to carry on the work of the hospital. An answer will be given in some three weeks' time, and much will depend upon Mr. Waterhouse's report. There is a very strong feeling among a large section of the governors that the corporation, from whom alone additional or new ground can be obtained, are somewhat indifferent to the requirements of the infirmary.

Dec. 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Situation of the New Infectious Diseases Hospital at Belfast.

THE situation of the new infectious diseases hospital to be built by the city corporation is at present under consideration. I understand that of the several available sites placed at the disposal of the Public Health Committee the one considered most feasible was that at Purdysburn, but at a very large and representative meeting of the Ulster Medical Society, held on Nov. 23rd, it was decided to send a deputation to the Public Health Committee on Nov. 26th, and they urged, among other matters, that "the Ulster Medical Society beg to enter their protest against the site selected at Purdysburn for the new infectious diseases hospital as being altogether too far removed from the densely populated districts of the city."[1] Another site is, however, available which has many advantages, and that is the Belfast District Lunatic Asylum at Grosvenor street, which is much more central than Purdysburn. Thus, taking a few distant points of the city area, from Greencastle to the Belfast Asylum is 4½ miles, while from the same place to Purdysburn is 7 miles. From Ligoniel to Purdysburn is 6¾ miles, while it is only 3½ miles to the Belfast Asylum. Even from the Knock and Strandtown the distance to the Belfast Asylum is only one mile more than to Purdysburn. These distances are measured "as the crow flies." But there is another argument in favour of the site at the Belfast Asylum grounds: the place already belongs to the corporation and consists of about sixty-four acres, of which five or ten could be taken for the new infectious diseases hospital, and the old asylum buildings could be utilised, and in this way less of the ratepayers' money would be required. Some may object that a hospital of such a nature in the centre of a city is prejudicial to the inhabitants, but as the grounds are large ample space can be got for isolation of the building, and the Metropolitan Asylums Board allow infectious diseases hospitals to be built within forty feet of a dwelling, provided a wall as high as the building is placed between the hospital and any other adjacent house. In the interests of the whole community the best site for the new infectious diseases hospital would be the old asylum grounds at Grosvenor-street, Belfast.

The Jubilee of Queen's College, Belfast.

The arrangements for the celebration of the jubilee are now fairly complete and the following is the programme:—On Tuesday, Jan. 19th, Earl Cadogan, Lord-Lieutenant of Ireland, will open in the afternoon the new students' union, and this ceremony will be followed by a reception given by the president and professors. In the evening Professor Symington (President of the Ulster Medical Society) will give an entertainment in honour of Sir Joseph Lister, Bart. On Wednesday, Jan. 20th, the graduates' dinner will be held, and the medical secretary is Dr. J. A. Lindsay, Great Victoria-street, Belfast, and the tickets are 15*s.*, exclusive of wine. On Thursday, Jan. 21st, Sir Joseph Lister, will give an address in connexion with the opening of the pathological and physiological laboratories, and on the same evening the students will have an "At Home" in the new Union Buildings. As the accommodation for the graduates' dinner is not large, those medical men who intend to be present should communicate as early as possible with Dr. J. A. Lindsay, the medical secretary.

The New Royal Hospital, Belfast.

At a meeting of the general committee held in the town hall on Dec. 18th it was announced that the staff of the hospital had subscribed for the erection of the new building a sum of £1300. It was also reported that £28,817 10*s.* had been promised. The directors of one of the greatest spinning mills in Belfast, the York-street Spinning Company, have recommended their shareholders to contribute £5000; this, when added to what has been already subscribed, brings the total sum up to £34,000, which is a third of the whole amount asked, and it has been raised in ten days. A philanthropic promptitude most creditable to the city of Belfast.

Rabic Mutton?

A great sensation has been caused in the west of the county of Cork owing to two brothers of the farming class having become almost simultaneously insane; one was aged thirty-three years and the other twenty-eight years. The elder had been in failing health for some time, but the younger was healthy and robust. Last Saturday both men lost their reason completely and became so violent that it was found necessary to have them removed to the asylum. The curious part of the business is that it is alleged that they ate some of the flesh of a sheep that had been bitten by a rabid dog.

Dec. 21st.

[1] THE LANCET, Dec. 5th, 1896.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Prussian Medical Chambers.

BY a law of 1887 the medical men of each province of Prussia are entitled to elect a Medical Chamber (Aerztekammer) as an official representative body of the profession. The Chamber is consulted by the Government in questions concerning the interests of the medical practitioners; it has, moreover, a certain disciplinary power, which, however, is not very strong, the only punishment for ethical misdemeanours being the removal of the offender from the list of electors and the publication of this penalty. The members of the Chambers are elected by written voting papers; there is one representative for each fifty medical men of a province; all the medical practitioners of a province elect their representatives together. If, for instance, a province has 1200 medical men the Medical Chamber consists of twenty-four members, and each practitioner has, therefore, to vote for twenty-four candidates. Each representative has a substitute, also chosen by election, who takes his place when the representative dies before the end of his term of office, or is prevented by other causes from attending the meetings. Each Medical Chamber, as a rule, assembles twice a year and elects a president secretary, treasurer, &c., as a permanent committee to deal with urgent business in the interval between the sittings. Members of the eleven Medical Chambers meet from time to time in Berlin to discuss questions of general interest. The so-called conjoint committee (Aerztekammer-Ausschuss) has the privilege of sending delegates to the *Wissenschaftliche Deputation* or Local Government Board for the consideration of medical affairs, consisting, in addition to those delegates, of Government medical officers and professors of the Berlin University, and presided over by the director of the Government Medical Department. The Medical Chambers were never very popular, and at the first elections in 1887 and 1890 the profession was somewhat indifferent; but at the last polling, in 1893, when the free-choice system in club practice formed a prominent question, the contest was more animated. The elections for the new triennial period have just taken place, and are this time of a special importance. The Government, as mentioned already in these columns, has the intention of extending the disciplinary power of the Chambers by constituting them courts of honour, and by granting to those courts an authority in deciding questions of ethics equivalent to that of an ordinary law-court. Some time ago the Government asked the Medical Chambers for an expression of opinion on the subject. The majority, although in principle approving of the Bill, wished to have modifications in several articles, the principal matters of controversy being the invidious exemption of medical officers of the military and civil services from the jurisdiction of the courts and the exercise of discipline in respect of non-professional matters. The Government, in view of this conflict of opinion, thought it advisable to postpone legislation and to wait until the Chambers which have just been elected should have an opportunity of expressing their views. The new Chambers will, moreover, have to deal with some other very important questions—for instance, the re-enactment of the laws against medical practice by unqualified

persons, laws which, in the opinion of many medical men, ought never to have been abrogated. In Berlin two opposing parties canvassed the electors, just as in Parliamentary contests. One, the Governmental party, supported all the articles of the Bill relative to the establishment of courts of honour and the suppression of irregular practitioners, at the same time opposing a reform of club practice. The other side discountenanced the above-mentioned proposal to extend the disciplinary power of the Chambers and the enactment of laws against unqualified practice, but favoured the free-choice system in sick clubs. The result was that in Berlin the thirty-eight candidates of the opposition to the Government were at the head of the poll. The provincial elections resulted variously. It remains to be seen whether the Government will be inclined to modify its legislative proposals. There is hardly any ground for hope that the wants of the profession will be considered when the matter comes before Parliament, for there are but five medical men in Parliament, and the other members have only a very limited knowledge of questions relating to the medical profession.

The Strike at Hamburg.

The great strike of dock labourers at Hamburg is not only a matter of general concern but possesses some features of medical interest, as an enormous number of accidents happen in the port owing to the employment of unskilled foreign workers in place of the men who are on strike. Not being trained for the work and not being familiar with the machinery in use at the docks, these non-unionists are exposed to various risks, and the Hamburg newspapers report every day a great many severe accidents, such as fractures and lesions of the internal organs. The surgical wards of the hospitals are crowded with such patients. Another consequence of the strike is that many of the workers who suffer from chronic ailments, but would nevertheless under ordinary circumstances have continued at their employment, now throw themselves on the sick clubs, so that if the strike is of long duration the position of these clubs will become serious.

Dec. 20th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Epidemic of Typhoid Fever at Pola.

OFFICIALLY Austrian, the Istrian triangle is so preponderatingly Italian in population, language, and patriotic sympathy that its vicissitudes—political, social, and, not least, sanitary—are keenly watched by the motherland. It is the last of these interests that, for the moment, absorbs most attention in Italy. Pola, at the apex of the triangle, the headquarters of the Austrian navy, and within hail, so to speak, of the Venetian littoral, has for two months been decimated by typhoid fever so as to have become an exceedingly perilous neighbour. The epidemic began about the end of October, at first mildly, but thereafter with increasing virulence, till on the 14th inst. there had occurred no fewer than 600 cases out of a commune numbering 30,000 souls. The *personnel*—officers and crews—of the Imperial navy have had 176 invalided or subsequently dead from the disease. The schools have been closed by the municipality, and families by scores have left the city. The population is full of alarm, impressed to something like panic by the inadequacy of the medical service, each physician having more than 150 patients on his hands in the twenty-four hours. One of these practitioners, Dr. Matausek, a young member of the navy medical staff, struck down by the disease, in an access of fever flung himself from his bedroom window in the hospital and was picked up dead from fracture of the cranium. The Imperial Government has charged the sanitary specialists from Gratz to examine the drinking-water and other health conditions of the city; and, so far as is already known, the pollution of the "acqua potabile" is the main cause of the epidemic. This provocative of disease is, to the discredit of Austria, quite a standing feature in Istrian sanitation. Trieste is, from the same cause, one of the unhealthiest cities of Europe and notoriously a "diphtheria preserve." Abbazia, meant by nature to be a queen among winter resorts (witness the glowing panegyric of its merits by Billroth, who spent his last days amid its amenities), loses annually a numerous *clientèle* by its bad drainage, and is frequented almost solely by the Viennese aristocracy who can afford to live in well-appointed, well-cared-for villas. The backward hygiene of the whole triangle is, as I have said, of perilous import for Venice and the Italian coast opposite and is utilised to strengthen the movement for the reclamation of "Italia Irredenta." Not that Istria would make much change for the better by reverting to its Italian mistress. But apart from international pretentions, Austria, if only as the centre of one of the greatest of medical schools and as the pioneer and parent of many valuable innovations in the healing art, owes a duty to herself as well as to her foreign subjects in maintaining a cleaner bill of health than that so unhappily notorious on her Adriatic littoral.

Professor Lorenzo Recchia.

Naples has lost a distinguished surgeon and the Neapolitan School a highly creditable alumnus in Dr. Lorenzo Recchia who died, after four months' confinement to bed, from progressive spinal paralysis. He was but fifty years of age, but his reputation had already been established when as quite a young man he held the important chair of clinical surgery in the Pellegrini Hospital. He was also surgeon to the Collegio Vittorio Emanuele and in both capacities was noted for the skill and assured boldness with which he undertook, and succeeded in carrying through, the most difficult operations. His funeral was an impressive one, public as well as academic in representation, and was further made memorable by the singularly touching *oraisons funèbres* delivered by Professor Arena and Professor Lupò over his all too untimely grave.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Health of the British Troops.

THE present condition of the garrisons is excellent, the sick-rate being low for the time of year, and in 1896 there have been in Cairo and Alexandria fewer cases of all diseases, including enteric fever, than in previous years. According to the latest returns there are now 6·6 per cent. sick in Cairo, and nearly half of this sickness is due to venereal disease, while in Alexandria the rate is 8·4 per cent., of which more than one-half is venereal. The number of cholera cases during the summer was only 6 in Lower Egypt, and all these were contracted in the town out of barracks. All this is highly satisfactory, but the tale of the one English regiment accompanying the Dongola Expeditionary Force points a moral which must not be neglected. In July there were 21 deaths from cholera up the Nile among the British troops, and before the North Staffordshire Regiment reached Dongola they had had, according to the correspondent, 26 deaths—namely, 20 from enteric fever, 1 from dysentery, and 5 in Cairo among those who had been invalided from the front. Then on one fatal day, Sept. 23rd, this regiment, which had not had a single wounded man during the five months' campaign, met with a treacherous enemy lurking in unclean water. The story is too long to be told in any detail. The day's march was expected to be a fairly short one and proved, on the contrary, to be a long one, in exceptionally trying weather. The men's water bottles, said to be smaller than those supplied to the Egyptian soldiers, were all empty long before the welcome halt came. Officers and men parched with thirst rushed to the first water they saw, and greedily drunk from an infiltration of Nile water filling up a depression which had been used by the native inhabitants as a village latrine. Only a day or two later diarrhœa and dysentery began, and towards the close of the second week enteric fever had broken out. The regiment reached Cairo with all convenient speed on Oct. 9th, and on or about that date they had fifty cases of enteric fever in hospital. One officer and at least a dozen men have died, and the sick list from enteric fever, dysentery, and diarrhœa has remained extremely heavy until this month, when all the survivors emerged into convalescence. The net result of the campaign is that 59 men out of 900 died from cholera and enteric fever—diseases connected with water-supply. Without reckoning the expenses of the sick who happily did not succumb these 59 men have cost the State several thousands of pounds. Looked at merely as a commercial loss, if we are right in calling these diseases preventable, these thousands of pounds have been unnecessarily wasted.

The English regiment was not provided with Pasteur-Chamberland or Berkefeld filters. Let us hope that this oversight was not the result of any ill-judged economy on the part of the Army Service Corps in London or in Cairo. The regiment trusted to boiling water for the destruction of germs, but who can wait in tropical summer heat to quench his thirst while the boiled water is cooling down? It may be argued that no efficient filters would have prevented the catastrophe of September 23rd, but at least some of the men might have been induced to wait till rapid pump filters had purified the water. Has it ever been pointed out to the able and energetic Commander-in-Chief that the English army at home and abroad is as regards filters not up to the level of the French and German armies, both of which believe that their typhoid fever rate has been diminished by the employment of filters which are bacteriologically perfect? The Medical Staff in Egypt has for some years been endeavouring to induce the authorities to provide Pasteur filters for all barracks and hospitals in Cairo and Alexandria, but even now they are not universally employed in the army of occupation. It would be interesting to know who the officials are who block this much-needed reform. At least, we may hope that the misfortunes of the North Staffordshire Regiment will ensure an outfit of filters being sent up the Nile with any future English expedition.

Sanitary Inspectors.

Dr. Bitter has now taken up his residence in Cairo in order to open as soon as possible the new Institute of Hygiene. His place in Alexandria as sanitary inspector to the Municipality with a seat at the Quarantine Board has been filled by a nominee of Professor Koch, Dr. Gotschliech, lately assistant to Professor Fluger of Breslau.

Dengue Fever.

This disease, when it visits Egypt, appears in August and lasts till the beginning of December, when it is apparently killed off by the colder weather. The infection, like that of influenza, is probably brought by individuals on board ship coming from places well within the dengue area, such as Aden, Zanzibar, or Bombay. In 1880 there was a well-recognised epidemic all over Egypt, and the last time the disease occurred in anything that could be called an epidemic was in 1887.[1] History has again been repeated with regard to the question of diagnosis. In 1887 the disease was not at first recognised as dengue, because the swellings of the joints and pain were less evident than in 1880, and again because it differed remarkably in severity from dengue epidemics seen in India, which is of course in the middle of the restricted dengue area. Some of the army surgeons upon the last occasion were prepared to call the epidemic scarlet fever. This year for similar reasons some have called it rötheln. The symptoms suggestive of dengue this year have been shortness of incubation, the suddenness of onset, severe pain in the head and to a less extent in the eyeballs and muscles, the appearance of the erruption on the third or fourth day, when the fever had almost disappeared and the patient was feeling nearly himself again, and lastly, the rheumatic type of some cases and the severity of others. The disease attacked this year several people who had previously suffered in England from rötheln. Dengue began, as on former occasions, in Ismailia and Port Said about the first week in August, when the heat and humidity are approaching the maximum. It spread to Cairo at the end of August and seems this year to have been more prevalent among Europeans than among natives. Severe cases have been very rare, but, on the other hand, the eruption has been unusually distinct, resembling rötheln more than either measles or scarlet fever. The fever seldom lasted more than three days, was never associated with catarrh, and was evidently very infectious. Since the beginning of December there have been no new cases.

Cairo, Dec. 15th.

[1] THE LANCET, July 21st, 1888.

MIDNIGHT CALLS: A DANGEROUS FORD NEAR LANCASTER.—The Lancashire County Council have declined to entertain an application submitted to them at the suggestion of the county bridge master for the erection of a bridge over the River Conder at Damhead, where in consequence of the dangerous state of the ford two Lancaster medical men in responding to midnight calls have been precipitated into the bed of the river, sustaining severe injuries. The estimated cost is only some £120.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the examination for medical and surgical degrees in the Michaelmas term the following were successful in the subjects indicated:—

FIRST EXAMINATION.

Part I.—Elementary Biology.—Adams, Gonville and Caius; J. F. Alexander and C. A. Anderson, Trinity; Bennion, St. John's; Bryan and Byles, King's; Cole, Droop, and Etherington-Smith, Trinity; W. H. Fisher, Emmanuel; Forsyth, Gonville and Caius; Freshwater, Trinity; G. W. Greene and Heath, Downing; H. D. Hoffman and J. H. Kellgren, Trinity; Kitchen, Sidney Sussex; R. O. Lee, Emmanuel; Leighton, St. John's; Loveday, Lowe, and Lucas, Gonville and Caius; Mathias, Nathan, B.A., and Nedwill, Trinity; Newman, Jesus; Noon, Trinity; Paton, B.A., Gonville and Caius; Payne, Peterhouse; Pipkin, Emmanuel; R. M. Ranking, Pembroke; Riddle, Peterhouse; H. Robinson, Trinity; Sephton, B.A., Gonville and Caius; Shone, Emmanuel; B. Spearman, Gonville and Caius; Statham, Christ's; Stocker, Trinity; Wales, Sidney Sussex; Wild, Jesus; H. C. Williams, B.A., and A. B. Wilson, Pembroke; and Wollaston, B.A., King's.

SECOND EXAMINATION.

Part II.—Human Anatomy and Physiology.—Alder, B.A., Pembroke; Ascherson, Non-Collegiate; Bainbridge, B.A., Trinity; Barham, B.A., Gonville and Caius; Bayly, B.A., Clare; Boucher, B.A., Trinity; Bradford, B.A., Emmanuel; H. P. Bradley, B.A., Gonville and Caius; W. P. S. Branson, B.A., Trinity; F. E. Brunner, B.A., Gonville and Caius; Burfield, B.A., Emmanuel; Burnand, Jesus; Carver, B.A., Clare; H. N. Clarke, B.A., Trinity; Curl, B.A., Downing; Davies, B.A., Gonville and Caius; H. St. C. Elliott, B.A., Trinity; Fraser, B.A., Jesus; Graham-Smith, Pembroke; T. B. Hardie and Harwood, B.A., Trinity; Hawkins, B.A., Emmanuel; J. L. Lock, B.A., and McCaskie, B.A., Gonville and Caius; J. C. Matthews, St. John's; Mayo and Mummery, Gonville and Caius; Nelson, B.A., Clare; Pearson, B.A., Sidney Sussex; Pettinger, B.A., H. Selwyn; Powell, B.A., Emmanuel; J. H. Roberts, B.A., St. John's; A. R. Roche, Queen's; R. N. Salaman, B.A., Trinity Hall; Sanger, St. John's; R. E. Sedgwick, B.A., Gonville and Caius; Shufflebotham, B.A., Trinity; W. C. P. Smith, B.A., Down; T. S. Taylor, B.A., King's; Telford, Gonville and Caius; Trevor, B.A., Clare; Truman, Trinity Hall; Tucker, B.A., Watts-Silvester, B.A., and Willoughby, Gonville and Caius; Wingate-Saul, B.A., Trinity; and Winton, B.A., Clare.

THIRD EXAMINATION.

Part I.—Betteridge, B.A., Gonville and Caius; Brown, B.A., Pembroke; J. R. Charles, B.A., Gonville and Caius; H. G. Cooper, B.A., Emmanuel; Green, B.A., Downing; Harman, St. John's; Jeaffreson, B.A., and Kirk, B.A., Christ's; S. H. Long, Gonville and Caius; McCarthy, B.A., non-collegiate; McCleary, B.A., Trinity Hall; McDougall, B.A., St. John's; Manby, B.A., Christ's; C. E. Marriott, B.A., Clare; Martin, B.A., Gonville and Caius; May, M.A., Clare; Michael, B.A., H. Selwyn; Muir, B.A., Emmanuel; W. Myers, B.A., Gonville and Caius; Norbury, B.A., Trinity; Ogilvie, B.A., Christ's; A. R. Paterson, B.A., and Porter, B.A., Emmanuel; Roe, B.A., Pembroke; Shewell B.A., Trinity; Skyrme, B.A., and Snowdon, Christ's; F. G. Thomas, B.A., Gonville and Caius; Trouncer, Jesus; Turner, B.A., Emmanuel; and E. J. Woolley, B.A., Gonville and Caius.

Part II.—Auden, B.A., Christ's; Baird, B.A., Gonville and Caius; L. P. Black, B.A., Trinity Hall; W. L. Brown, M.A., and A. G. Butler, B.A., St. John's; J. N. Gardiner, B.A., Trinity Hall; Hadow, M.A., L. K. Harrison, B.A., and Haslam, B.A., Gonville and Caius; Hutchinson, M.A., Trinity Hall; T. L. Jackson, B.A., St. John's; Langdon, B.A., Gonville and Caius; Lillie, B.A., St. John's; C. E. Marriott, B.A., Clare; J. M. Martin, B.A., Peterhouse; Maturin, B.A., Gonville and Caius; Milsome, B.A., Trinity; Muriel, B.A., Downing; A. S. J. Pearse, M.A., Trinity; Rawling, B.A., Gonville and Caius; Roper, B.A., Christ's; Salt, B.A., Emmanuel; Shoyer, B.A., and Stawell, B.A., Trinity Hall; F. G. Thomas, B.A., Gonville and Caius; Tyrrell, B.A., Clare; Waithman, M.A., Magdalene; Wakefield, M.A., Trinity; H. Williamson, B.A., St. John's; and Wills, B.A., and H. W. P. Young, Gonville and Caius.

UNIVERSITY OF CAMBRIDGE.—Dr. A. S. Lea, F.R.S., has been appointed an elector to the chair of Physiology in the room of the late Sir G. M. Humphry. Dr. Anningson, Dr. Lazarus-Barlow, Professor Lane Notter, Dr. Stevenson, and Dr. Thorne Thorne have been appointed Examiners in State Medicine for the ensuing year. The following medical degrees were conferred on Dec. 10th:—M.B. only: F. A. S. Hutchinson, M.A., Trinity; M.B. and B.C.: R. P. McCarthy, B.A., Caius; E. M. Barker, B.A., Emmanuel; and C. P. White, B.A., Sidney.

A POLL of owners and ratepayers of Lowestoft was taken last week, when there was a majority of 1106 in favour of proceeding with the Bill in Parliament for the compulsory purchase of the waterworks from the company. A special committee has been inquiring into the water question for some months, and the Council unanimously decided to promote the Bill, the objects being to place the water-supply above suspicion, increase the supply, improve the works, and to enable the corporation to close the polluted wells and to abolish the middens, and to provide for the better flushing of the sewers.

WIGAN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 10th, 1896, Mr. C. R. Graham, President, being in the chair. The meeting was very largely attended. Mr. Wm. Edelsten Bracey showed his Portable Irrigator. — A discussion then took place on Dr. Rees' paper on the Remuneration of Medical Men, the paper having been printed and circulated by the society.—Dr. Rees opened the discussion and the President, Mr. Brady, Mr. T. M. Angior, Mr. Parker, Mr. Part, Mr. Cooke, Mr. Bracey, Dr. Blair, Mr. Monks, and Dr. Benson took part in what proved to be an interesting debate.—Dr. Rees replied, and proposed the following gentlemen as a committee to form a medical guild: Mr. C. R Graham, Mr. Wm. Mitchell Roocroft, Mr. Berry, Mr. Monks, Mr. Brady, Mr. Cooke, Mr. Parker, Dr. Rees, Dr. Benson, and Mr. T. M. Angior, with power to add to their number.

BOOKS, ETC., RECEIVED.

ALCAN, FELIX, Paris.

Dixième Congrès de Chirurgie. Paris. 1896.
Chirurgie de la Foie. Par F. Terrier et Drs. Guillemain et A. Malherbe. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

A Handbook of Pathological Anatomy and Histology. By F. Delafield, M.D., LL.D., and T. M. Prudden, M.D. Fifth edition. Illustrated. 1897. Price 25s.
Functional Disorders of the Nervous System of Women. By T. J. McGillicuddy, A.M., M.D. Illustrated. 1896. Price 12s. 6d.
Bacteria of the Sputa and Cryptogamic Flora of the Mouth. By F. Vicentini, M.D. Translated by Rev. E. J. Stutter and Professor E. Saleghi. 1897. Price 7s. 6d.
Bacteriological Diagnosis. By St George Reid. 1897. Price 2s. 6d.

BLACK, A. and C., Soho-square, London.

Black's Guide to Bournemouth and the New Forest. Edited by A. R. H. Moncrieff. 1896.

CARRÉ, G., ET C. NAUD, Paris.

Anatomie Pathologique: Cœur, Vaisseaux, Poumons. Par Maurice Letulle. Illustrated. 1897.

CARRINGTON, CHAS., Paris.

Untrodden Fields of Anthropology: a Record of Thirty Years' Experience in Asia, Africa, and America. By a French Army Surgeon. 1896. Vols. I. and II.

CHAPMAN AND HALL, London.

Alterations of Personality. By A. Binet. Translated by Helen Green Baldwin, and preface by J. Mark Baldwin. 1896. Price 6s.

GOVERNMENT PRINTING OFFICE, Washington.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second Series. Vol. I., A. Azzurri. 1896.

HOPKINS, HUGH, West Regent-street, Glasgow.

The Medical Environment. Two addresses: (*a*) On the Hospital Question; (*b*) On Medical Ethics. By D. Campbell Black, M.D. 1896.

LIPPINCOTT, J. B., COMPANY, Philadelphia.

An Autumn Singer. By G. M. Gould, A.M., M.D. 1897.

KING, J. K., AND SON, Brunswick-street, Manchester.

Practice of Medicine. By Jas. Tyson, M.D. Pennsylvania. Illustrated. 1896.

LEWIS, H. K., Gower-street, London, W.C.

A Practical Treatise on Materia Medica and Therapeutics. By R. Bartholow, M.A., M.D., LL.D. Ninth edition. 1896. Price 21s.
The Medical and Surgical Uses of Electricity. By A. D. Rockwell, A.M., M.D. Illustrated. New edition. 1896. Price 18s. net.
Compressed Air Illness or so-called Caisson Disease. By E. H. Snell, M.D., B.Sc. Lond. 1896. Price 10s. 6d.
What to do in Cases of Poisoning. By William Murrell, M.D., F.R.C.P. Eighth edition. 1897. Price 3s. 6d.
Rough Notes on Remedies. By William Murray, M.D., F.R.C.P. Lond. Second edition. 1897. Price 3s. 6d.

MACMILLAN AND CO., London.

The Natural History of the Marketable Marine Fishes of the British Islands. By J. T. Cunningham, M.A. Oxon., with a Preface by E. R. Lankester, M.A., LL.D., F.R.S. 1896. Price 7s. 6d. net.
Hygiene for Beginners. By E. S. Reynolds, M.D. Lond. Illustrated. 1896. Price 2s. 6d.

METHUEN AND CO., Essex-street, London, W.C.

Life in West London: a Study and a Contrast. By A. Sherwell. 1897. Price 2s. 6d.

STEINHEIL, G., Paris.

Traité de Thérapeutique et de Matière Médicale. Par Victor And' Houi. 1897.

TEULINGS, C.N.'s, Hertogenbosch.

Feestbundel nitgegeven door de Nederlandsche Vereeniging voor Psychiatrie ter eere van haar 28–Jarig Bestaan.

THE NEW SYDENHAM SOCIETY, London.

A Treatise on Cholelithiasis. By B. Naunyn, M.D. Translated by A. E. Garrod, M.D., F.R.C.P. 1896. Vol. 158.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand.

The Private Sanatoria for Consumptives and the Treatment adopted within them. By A. von Jaruntowsky. Translated by E. C. Beale, M.B. Cantab., F.R.C.P. Price 1s. 6d. net.

THE ROXBURGHE PRESS, Victoria-street, Westminster.

The Rosy Cross and other Psychical Tales. By Mina Sandeman.

THE SAVOY PRESS, 115, Strand, London.

Exposures of Quackery. By the Editor of *Health News*. Vols. I. and II. Price 1s. each.

THIN, JAMES, South Bridge, Edinburgh.

Pharmacopœia of the Royal Infirmary, Edinburgh. Revised and enlarged by Thomas Alexander. Second edition. 1896.

WRIGHT AND POTTER, Post Office-square, Boston, U.S.A.

Twenty-seventh Annual Report of the State Board of Health of Massachusetts. 1896.

The Story of the Gloucester Epidemic of Small-pox, told by F. J. Bond, M.D. Lond., with an Abstract of the Report of the Vaccination Committee of the Gloucester Board of Guardians, 1896 (The Jenner Society, Gloucester, 1896).—The Dental Surgeons' Daily Diary and Appointment Book for 1897 (J. Bale and Sons, Great Titchfield-street, Oxford-street, London); price 6s.—Transactions of the Association of American Physicians; eleventh session; vol. xi.; 1896 (printed for the Association, Philadelphia).—From Messrs. W. Collins, Sons, and Co., Bridewell-place, London, E.C., a variety of Collins's Diaries for 1897.—The Railway Map of South Africa; 1897 (published at the offices of *South Africa*, 39, Old Broad-street, London, E.C.); price 6d.—Some Effects of Certain Diets upon Excretion by the Kidneys and upon the Blood; by R. S. Aitchinson, M.D., F.R.C.P.E. (Turnbull and Spears, Edinburgh, 1896).—An Artist's Proof of one of Henry Graves and Co.'s latest publications, "Inasmuch as" (Henry Graves and Co., 9, Pall-mall, London); price 21s.—Minutes of the General Medical Council's Sixty-first Session, Nov. 23rd to Dec. 11th, 1896, with Appendices; vol. xxxiii. (Spottiswoode and Co., 54, Gracechurch-street, London, E.C.)—The Manufacture of Aerated Beverages, Cordials, &c., by Stevenson and Howell; Fourth edition, 1896 (published at their Office, Southwark-street, London, S.E.—Magazines, &c., for January: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, and Pearson's Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, E. W., F.R.C.S., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer of Health by the Slough Urban District Council.

BLACKFORD, J. V., M.D., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Senior Assistant Medical Officer to the Bristol City and County Asylum, Stapleton, vice H. T. S. Aveline.

CLARKE, J. JACKSON, M.B. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the City Orthopædic Hospital, London.

COOPER, H. S., L.R.C.P. Lond., M.R.C.S. has been appointed Medical Officer of Health by the Brightlingsea Urban District Council.

CRUTTWELL, H. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Hallaton Sanitary District of the Uppingham Union, vice F. S. Boreham, resigned.

DALGLIESH, C. A., M.D., B.S. Durh., has been appointed Honorary Pathologist to the Children's Hospital, Newcastle, vice G. R. Murray.

EDWARDS, L. C., M.B., C.M. Edin., has been appointed Junior House-Surgeon to the Chesterfield and North Derbyshire Hospital.

FREELAND, A. R. STILWELL, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Barnes Convalescent Hospital, Cheadle, Cheshire.

GIBSON, T., Junr., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse of the Sheffield Union, vice C. J. Gorringe.

HANNAH, N., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Ashton District Council.

JEFFERY, H. F., M.B., Ch.B. Vict., has been appointed Junior House-Surgeon to the Bury Infirmary.

KELLAND, J., M.B., C.M. Edin., L.R.C.P., L.R.C.S., has been re-appointed Medical Officer of Health for the Salisbury Rural Sanitary District.

LANGWORTHY, W. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 4 Sanitary District of the Plympton St. Mary Union, vice J. E. Adkins.

LEIGHTON, G. R., M.B. Edin., L.R.C.P., L.R.C.S. has been appointed Medical Officer for the Skenfrith District by the Monmouth Board of Guardians.

MURRAY, JAS. HAY, M.B., C.M. Edin., has been appointed Medical Officer to the Parish of Stirling by the Stirling Parish Council.

O'CONNOR, D. J., M.B., B.Ch. Irel., has been appointed Medical Officer to Messrs. A. Grant and Co.'s establishment, Patrick-street, Cork, vice R. Callaghan.

PORTER, W. S., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Physician to the Sheffield General Infirmary.

PRANGNELL, J. T., M.D., Glasg., D.P.H. Camb., has been appointed Medical Officer for the Burgh, and Physician to the Fever Hospital, by the Falkirk Town Council and Police Commissioners.

THOMPSON, W. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Shelf Urban District Council.

THURMAN, W. R., M.B., B.S. Durh., has been appointed Second Assistant Medical Officer to the Bristol City and County Asylum, Stapleton, vice J. V. Blackford.

TIPLADY, W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical and Vaccination Officer for Tow Law, Weardale.

TUBB-THOMAS, J., L.R.C.P. & S., D.P.H. Irel., F.S.S., F.R. Met. Soc., has been re-appointed Medical Officer of Health for the Borough of Lowestoft and the Port Sanitary Authority; also Physician to the Borough Sanatorium, Lowestoft.

WATTS, THOMAS, M.D., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Certifying Factory Surgeon for Hyde, vice G. W. Sidebotham, resigned.

WILLIAMS, C. W., M.R.C.S., L.R.C.P., L.S.A., has been appointed Surgeon to the Workhouse, and Medical Officer for the Smallburgh District, Smallburgh Union.

WILSON, J. D. OCTAVUS, M.B., C.M. Glasg., has been appointed House Surgeon to the Newcastle-on-Tyne Hospital for Sick Children (Fleming Memorial).

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.

BOROUGH OF BRADFORD FEVER HOSPITAL.—Resident Medical Superintendent, unmarried. Salary £200 per annum, with board and residence. Applications to the Town Clerk, Town Clerk's Offices, Bradford.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn-circus, London.—Honorary Physician.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR WOMEN, Soho-square, London, W.—Assistant House Physician (non-resident) for three months.

LEICKSTER INFIRMARY.—Assistant House Surgeon for six months. Honorarium of £21 for that period, and board, residence at the Infirmary, and washing provided.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. £30 per annum, with board, lodging, and washing.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House Surgeon. Salary at the rate of £100 per annum, out-door.

THE ROYAL ALBERT HOSPITAL, Devonport.—Honorary Ophthalmic Surgeon.

THE URBAN DISTRICT OF YSTRADYFODWG.—Medical Officer of Health, for one year. Salary £450, including travelling expenses. Applications to Mr. W. H. Morgan, Clerk, Treforest, Glamorganshire.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant, qualified, for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

ABRAHAMS.—On Dec. 18th, at 14, Welbeck-street, Cavendish-square, W., the wife of Bertram L. Abrahams, M.B., B.Sc., M.R.C.P., of a daughter.

LIDDON.—On Dec. 15th, at Silver-street House, Taunton, the wife of Edward Liddon, M.D., J.P., of a son.

PHIPPS.—On Dec. 20th, at The Shrubbery, Woking, the wife of H. H. Phipps, M.R.C.S., L.R.C.P. Lond., of a son.

MARRIAGES.

MAUNSELL—CHESTER.—On Nov. 7th, at St. Andrew's Church, Bombay, Surgeon-Colonel Charles A. Maunsell, P.M.O., Mhow and Deesa District, to Frances W. Chester, youngest daughter of the late Frederick J. Chester of Poyle Park, Surrey.

ROSS—FELTON.—On Dec. 19th, at St. Simon's, Southsea, W. Levingston Ross, L.R.C.S. and L.R.C.P.I., of Burslem, Staffordshire, to Laura, daughter of the late G. M. Felton, C.C., of Cripplegate, E.C.

DEATHS.

BUNCH.—On Dec. 21st, at Gordon-place, Gordon-square, John James Bunch, M.R.C.S., aged 77 years.

DALTON.—On Dec. 17th, at Osmaston-road, Derby, Charles Bernard Dalton, M.R.C.S., aged 45 years.

FARRAR.—On Dec. 18th, at Chatteris, Cambs., Charles Farrar, M.D., aged 63 years.

HEATH.—On Dec. 14th, at his residence, Houghton-street, Southport, William Ravenscroft Heath, M.R.C.S. Eng., L.S.A., aged 61 years.

JAKINS.—On Dec. 17th, at Goldsmith-gardens, Acton, W., Isaac Negus Jakins, M.R.C.S., L.S.A., aged 96 years.

MALCOLM.—On Dec. 19th, at 421, Holloway-road, London, N., after a few hours' illness, Marjorie Noël, younger daughter of W. A. Malcolm, M.B., C.M., aged 5 years and 11 months.

ROBB.—At St. James's Lodge, Keith, N.B., on Nov. 27th, James Taylor Robb, M.D. Aberd., M.R.C.P. Lond., late of 33, Lowndes-street, S.W. aged 37 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 23rd, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 17	29·67	S.W.	30	...	34	33	29	...	Foggy
,, 18	29·51	N.W.	33	32	36	36	30	...	Overcast
,, 19	29·71	N.E.	35	34	43	38	29	...	Overcast
,, 20	30·14	W.	36	35	43	39	31	0·03	Overcast
,, 21	30·10	N.E.	38	35	40	40	35	0·01	Snowing
,, 22	30·06	S.W.	36	35	52	43	35	...	Foggy
,, 23	30·19	N.E.	38	36	41	40	36	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the current half-year is given in this week's issue, which completes the second volume for the year 1896. The practice of supplying loose copies of the Index has been discontinued. The Index is now placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 will be ready shortly. Bound in cloth, gilt lettered, price 1*s*., carriage extra.

Cases for binding the half-year's numbers will also be ready in a few days. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

A MEDICAL PEERAGE.

To the Editors of THE LANCET.

SIRS,—Is not the present a favourable time for bringing forward the question of a medical peerage to be conferred amongst the honours celebrating the Queen having reigned longer than George III., which happy event to a certain extent is due to the care of Her Majesty's physicians. I am, Sirs, yours faithfully,

Liverpool, Dec. 12th, 1896. J. BOOTH CLARKSON.

*** The question of the faculty of medicine being represented in the House of Lords as are the two other faculties is one which we think is always timeous.—ED. L.

THE CORONERS ACT.

To the Editors of THE LANCET.

SIRS,—The history of the following case will, I think, clearly prove that the above Act is a perfect farce. On Dec. 3rd, at 2 A.M., I was called to an urgent case, but only to see the patient take her last inspiration. A so-called midwife was in attendance and informed me that the woman was confined on the previous night at 11.45, at which time she had a "big loss," and, as far as I could gather, the hæmorrhage continued until the woman's death and yet nothing was done to arrest it. The case was reported to the district coroner, but he considered no inquest necessary. I am, Sirs, yours truly,

Keighley, Dec. 10th, 1896. H. CHARLES LING.

E. P. K.—No, it is not part of the duty of the medical officer of health. The Local Government Board has said in answer to this question:—"Such examination can only be made with the consent of the patient or of those having charge of the patient." Of course, there may be exceptional cases where such a course is desirable. Our correspondent will find every information on this and similar questions in the pamphlet, "Difficulties under the Infectious Disease (Notification) Act," price 6*d*., published at THE LANCET Office.

Hydro.—There are degrees of offensiveness in the way the advertisement is brought to the public notice. We do not approve of such advertisements, but they are hallowed by custom.

R. T.—The letter in question is, we know, addressed to us, but it has not appeared in our columns.

THE H. G. "IDEAL" CYCLING CORSET.

Now that ladies are taking to the bicycle in such large numbers it is very necessary that attention should be given to the production of a corset suitable for their use when cycling. It is claimed for the "Ideal" corset that it is scientifically cut in accordance with the natural lines of the body, avoiding all pressure and inconvenience, and, being especially designed for cycling, is made with short, pliable busks, to allow plenty of freedom in moving the legs and body when pedalling. The sides are low and made with elastic. The makers of the "Ideal" corset are Messrs. M. Guttman and Co., of 2, Fell-street, Wood-street, E.C.

W. P. F.—No, we believe it is not *legally* necessary; but we do not see how a medical attendant as a witness can give satisfactory evidence as to the cause of death unless he have satisfied himself that the patient is dead.

Edina.—We suppose our correspondent refers to the Medico-Psychological Association. If he will apply to the Secretary, Dr. F. Beach, 11, Chandos-street, Cavendish-square, he will obtain every information.

Miss L. W.—We cannot republish the letter.

CALCIUM SULPHYDRATE AS A DEPILATORY.

To the Editors of THE LANCET.

SIRS,—Can any readers of THE LANCET favour me with their experiences in the use of the above paste applied for the removal of hairs to the face? Is its use attended by any puckering, staining, or scar-marking of the cuticle, and will the application cause sufficient local smarting to deter one from prescribing it in cases where the skin is of a delicate texture—e.g., to the faces of female patients? What is the formula for the paste and how is it best applied and for how long?

I am, Sirs, yours truly,

Dec. 17th, 1896. SUBSCRIBER.

C. R. W.—We cannot help thinking that our correspondent takes a too pessimistic view. For giving a certificate 2*s*. 6*d*. is, we think, enough, especially as the 1*s*. mileage is apparently conceded. The question of attendance for treatment does not seem to us to be under discussion.

K. W. M.—Our correspondent will find in our advertising columns notices of numerous establishments for the condition he mentions.

ADVERTISEMENT.

THE following is extracted from the *People* of Dec. 20th, 1896:—

"DR. HARMAN TARRANT, F.R.C.S.E.

"HOSPITAL SURGEON for 16 years, may be consulted, by letter or personal interview, at 111, Edgware-road (near the Marble Arch); Specialist for Diseases of Men, Stricture, &c."

We suppose this gentleman is the Harman John Tarrant who is on the Medical Register as of Sydney, N.S.W. Perhaps the Royal College of Surgeons of Edinburgh will take such steps as it can to prevent such an abuse of its qualifications.

Dare quam accipere.—We do not think that there are any special regulations. Our correspondent will obtain every information by writing to the Registrar, University of London, Burlington-gardens, W.

Enquirer.—The paragraph is apparently founded upon a paper read before the National Academy of Medicine of Colombia by Dr. Juan de Diol Carrasquilla L. upon Nov. 22nd, 1895.

NOT AN EASY QUESTION.

To the Editors of THE LANCET.

SIRS,—I am a dentist, holding the Licence of the Royal College of Surgeons of England, and am also a member of the teaching staff of a general hospital. In the event of a patient of mine requiring an anæsthetic, suggesting the name of her own medical attendant, a homœpath, as anæsthetist, ought I to meet him?

Yours in doubt,

Dec. 17th, 1896. L.D.S. ENG.

*** Our correspondent is advised to adhere to the rule that prevails under general circumstances, and not to be assisted in his professional work by a homœopathist; but we recognise that the question as it arises in the case put by him has its peculiar features, and the profession might be interested to learn the opinions of the British Dental Association on the matter.—ED. L.

ERRATUM.—Dr. E. Diver requests us to say that in his letter appearing in THE LANCET of Dec. 19th the comma should have been placed after "moment" and not after "issued."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (30th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.) St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (31st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Blackpool Times, Llandudno Directory, Birmingham Post, Hull News, Herne Bay Argus, Dewsbury Reporter, Hereford Times, Chatham News, Stockton Herald, Burton Chronicle, Portsmouth Times, Worcester Herald, Auckland Star, Times of India, Pioneer Mail, Barnsley Chronicle, New York Herald, Derby Daily Telegraph, Liverpool Daily Post, Newcastle Journal, East Anglian Daily Times, Glasgow Evening News, Leeds Mercury, South Wales Post, Western Morning News, Architect, Builder, Scotsman, Manchester Guardian, Leicester Post, Bristol Mercury, Sussex Daily News, Pullen's Kent Argus, Cheltenham Mercury, South Eastern Gazette, Yorkshire Post, Halifax Courier, Hastings Independent, Lincolnshire Echo, Bradford Observer, Banffshire Advertiser, Batley Reporter, Leighton Buzzard Observer, Keighley News, Gillingham Weekly Record Wolverhampton Chronicle, Darlington Times, Bolton Chronicle, Somerset County Herald, Scottish Highlander, Sanitary Record, Hereford Times, Reading Mercury, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, City Press, Evening Post (Exeter), Local Government Chronicle, Le XIXe Siècle, Mining Journal, Surrey Advertiser, Evening Times (Glasgow), Local Government Journal, Beverley Recorder, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. W. T. Ainsworth, Shipley; Messrs. Armour and Co., Lond.; Messrs. Allen and Hanburys, Lond.; *Advertising*, Lond., Editor of.

B.—Mr. C. S. Bowker, Newport, Mon.; Mr. E. S. Bishop, Manchester; Dr. T. P. zum Busch, Lond.; Birmingham General Dispensary, Sec. of; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. C. Birchall, Liverpool; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Blondeau et Cie, Lond.; B. F., Lond.; Bedford General Infirmary, Sec. of; Mr. L. Browne, Lond.

C.—Dr. D. E. Cantillon, Grangetown; C. E. C. L., Lond.; Messrs. Crossley, Moir, and Co., Lond.; Messrs. A. H. Cox and Co., Brighton; Dr. J. R. T. Conner, Lond.; Cheyne Hosp. for Sick Children, Lond., Sec. of; Condal Water Co., Lond.; Sir F. R. Cruise, Dublin; Crystal Palace Co., Lond.; Dr. J. S. Clayton, Accrington; Chelsea Hosp. for Women, Lond., Sec. of; Dr. J. L. Cuppaidge, Ford; C., Lond.; Dr. Astley V. Clarke, Lond.; Dr. W. H. Cooke, Bath; Coombs' "Eureka" Aerated Flour Co., Nottingham; Corporation Hosp., Bootle, Liverpool, Matron of; Mr. J. Booth Clarkson, Liverpool; County Borough of Croydon, Accountant of; Cortland Wagon Co., Lond.

D.—Mr. A. Duke, Cheltenham; Dental Hosp. of London, Sec. of; D., Lond.; Surg.-Maj. A. Duncan, Debra Doon, N.W.P.; Mr. T. W. Dewar, Dunblane.

E.—Mr. T. S. Ellis, Gloucester; Établissement Thermal D'Uriage, France, Director of.

F.—Mr. J. O. Fraser, Portobello; Messrs. Ferris and Co., Lond.; Fellow's Medical Manufacturing Co., Lond.; F. A. C., Lond.; San Francisco City (Health Department of), Sec. of; Mr. R. FitzGerald Frazer, Brighton.

G.—Mr. C. F. Gerhardt, Lond.; Dr. H. M. W. Gray, Berlin; Dr. W. Gordon, Exeter; Dr. Ramón Martin Gil, Málaga, Spain; Guy's Hosp., Lond., Sec. of.

H.—Mr. R. Harrison, Lond.; Mr. J. F. Hale, Chesterfield; Messrs. C. J. Hewlett and Son, Lond.; Mr. A. W. Harris, Southampton; Mr. W. C. Herring, Paris; The Hospital for Sick Children, Gt. Ormond street, Lond., Sec. of.

J.—Dr. W. W. Jones, Lond.; Mr. E. Jenner, Lond.; Junius, York; Herr Alex. Judt, Berg-Stuttgart, Würtemburg; J. S. G., Bucaramanga, Republic of Columbia.

K.—Dr. H. R. Kenwood, Lond.; King's College Hosp., Lond., Warden of.

L.—Dr. J. F. Little, Lond.; London Hosp., Matron of; Mr. W. K. Lee, Fulham, Middlesex; Sir H. D. Littlejohn, Edin.; Mr. T. T. Lacey, Chorlton-cum-Hardy; Messrs. Lee and Nightingale, Liverpool; Local Government Board, Sec. of.

M.—Dr. D. McDonnell, Belfast; Messrs. Maple and Co., Lond.; Mr. C. A. Morton, Clifton; Mr. E. Mogg, Bridgwater; The Middlesex Hosp., Lond., Sec. of; Messrs. J. Maythorn and Son, Bigglewade; Maltine Manufacturing Co., Lond.; *Münchener Medicinische Wochenschrift*, Rédacteur of; Maison Pinet, Lond.

N.—Messrs. Newton and Co. Lond.

O.—Mr. E. B. Owen, Lond.

P.—Mr. Y. J. Pentland, Edin.; Peptenzyme Co., Lond.; Patents and Manufacturers' Development Co., Lond., Sec. of; Mr. Norman Porritt, Huddersfield; Dr. T. W. Parry, Youlgreave; Dr. Max von Pettenkofer, Munich, Bavaria; Dr. R. Purdie, Lond.; Principal, Croydon.

Q.—Queen's Commemoration Fund, Lond., Hon. Secs. of.

R.—Dr. G. A. O. Reid, Southsea; Dr. C. Reid, Stafford; Royal Free Hosp., Lond., Sec. of; Messrs. Reynolds and Branson, Leeds; Royal Albert Hosp., Devonport, Sec. of.

S.—Dr. G. E. Shuttleworth, Richmond; Messrs. Street & Co., Lond.; Sell's Advertising Agency, Lond., Manager of; Mr. Noble Smith, Lond.; St. George's Hosp., Lond., Sec. of; Mr. A. Stenhouse, Glasg.; Sunderland and North Durham Eye Infirmary, Sunderland, Sec. of; St. John Ambulance Association, Lond., Chief Sec. of; Society of Public Analysts, Lond., Hon. Sec. of.

T.—Dr. J. Ashburton Thompson, Sydney, N.S.W.; The Typewriter Co., Lond.; Mr. S. Torbett, Middlesbro'; Messrs. Terry and Co., Lond.

V.—Victoria Medical Society, Melbourne, Sec. of; Victoria Hosp. for Sick Children, Lond., Sec. of; Victoria Hosp. for Children, Chelsea, Matron of.

W.—Dr. F. J. Waldo, Lond.; Dr. Francis Warner, Lond.; Mr. J. H. Wigham, Leeds; Dr. C. R. Walker, Leytonstone; Messrs. W. Wood and Co., New York; Mr. W. S. Webster, St. Leonards; Mr. S. Wand, Leicester; Wolverhampton General Hosp., Sec. of.

Y.—Ystradyfodwg Urban District Council, Clerk of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. R. R. Anderson, Fernhill; A. B., Lond.; Anderson's College Medical School, Glasg., Treasurer of; Mr. J. Ashton, Newtown; Abstainer, Lond.; Mr. B. L. Abrahams, Lond.; Mr. M. Allen, Lond.; Mr. W. Anderson, Lond.

B.—Mr. J. Bowrick, Lond.; Dr. A. E. Booth, Liverpool; Bailiff, the, Coed-y-brain; Dr. D. Beatson, Coldred; Mr. H. Baker, Lond.; Dr. Burnett, Woodhurst; Mr. C. Baker, Lond.; Mr. M. Benson, Wigan; Beresford, Lond.

C.—Messrs. J. Chapple and Sons, Lond.; Cambrian Newspaper Co., Swansea; C. F. M., Belfast; Cantab, Liverpool; Cymro, Lond.; Carbon, Lond.; Mr. E. Chubb, Lond.; Mr. F. J. Commin, Exeter; Dr. W. Cotton, Bishopstown; Messrs. J. A. Clark and Son, Lond.; Mr. F. W. Clarke, Manchester.

D.—Mr. S. G. Denton, Lond.; Dr. H. Davy, Exeter; Messrs. Deacon and Co., Lond.; Dub., Lond.; Dr. E. A. Doyle, Leigh, Lancs.

E.—Dr. J. W. Edgar, Settle.

F.—Mr. E. K. Foreman, Lond.; Dr. A. M. Fraser, Southsea; Messrs. J. W. Falkner and Sons, Lond.

G.—Dr. H. W. Gardner, Shrewsbury; Mr. E. Groves, Hunslet; Messrs. Grindlay, Grooms and Co., Lond.; Glasgow University, Sec. of; Dr. E. Goodall, Carmarthen.

H.—Mr. P. Hayes, Bury; Mr. L. J. Harris, Lond.; Mr. M. F. Hopson, Lond.; Mr. W. S. Henderson, Liverpool; Mr. G. Hermanni, jun., Lond.; Mr. J. Heywood, Manchester; Mr. L. Hanks, Lond.; Mr. J. Hyde, Stalybridge; Dr. J. Hinshelwood, Glasg.

J.—Mr. G. James, Tenby.

K.—Messrs. H. King and Sons, Lond.; Kumbakonam Municipal Council, Chairman of; Messrs. E. Kerry and Son, Lond.

L.—Mr. J. R. Long, Lond.; Messrs. Lister and Co., Lond.; Messrs. C. Liney and Sons, Lond.; Mons. Le Soudier, Paris; Messrs. W. G. Lark and Sons, Lond.; Locum Tenens, Leicester; Messrs. Langdale, Hallett, and Co., Lond.; Dr. P. Letters, Valencia Island; Mr. W. Latham, Ashton-in-Makerfield.

M.—Dr. W. H. Murray, Huntingdon; Meath Hosp., Hon. Sec. of; Dr. F. Murchison, Isleworth; Medicus, Hornsey; Dr. W. A. Malcolm, Lond.

N.—Mr. W. Neighbour, Lond.; Mr. H. Norman, Lond.

O.—*Oldham Standard*, Proprietors of.

P.—Mr. W. Pilgrim, Lond.; Mr. C. W. Patten, Lond.; Port, Lond.

Q.—Queen's College, Belfast, Sec. of.

R.—Mr. H. M. Riley, Leicester; Mr. W. Reynolds, Lond.; Mr. R. Rayner, Lond.; Mr. H. Richardson, Lond.; R., Pontypool.

S.—Dr. J. A. Shaw-Mackenzie, Lond.; Smilex, Lond.; Dr. S. Smith, Chester; Dr. T. M. Scott, Burnley; Mr. L. C. Shipton, Lond.; Mr. T. Sloman, Lond.; Mr. H. P. Shepherd, Lond.; Mr. R. J. Smerdon, Lond.; Messrs. J. Simpson and Son, Lond.; Messrs. S. N. Soole and Son, Richmond; Messrs. W. Stevens and Co., Lond.

T.—Mr. J. J. Tate, Ilfracombe; Messrs. Thurnam and White, Lond.; Messrs. Thomerson and Son, Lond.; Messrs. Turner and Withers, Lond.; Messrs. Taperell and Davis, Lond.; Thresh's Disinfector Co. (of Chelmsford), Lond.; Tower House Retreat, Westgate-on-Sea, Sec. of.

U.—Urbanus, Lond.

W.—Mr. C. Walcott, Boston, Mass.; Wirral Children's Hosp., Birkenhead, Sec. of; W. A., Lond.; Mr. T. S. Warracle, Burnley; Dr. T. Whitelaw, Portobello; Messrs. Wright, Layman, and Umney, Lond.; Mr. W. W. Wagstaffe, Sevenoaks.

Z.—Zeta, Lond.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6
Six Months	0 16 3
Three Months	0 8 2

POST FREE TO THE CONTINENT, COLONIES, UNITED STATES, INDIA, CHINA, AND ALL PLACES ABROAD.

One Year	£1 14 8
Six Months	0 17 4
Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to Mr. CHARLES GOOD, Manager, THE LANCET Office, 423, Strand, London.

ADVERTISING.

Books and Publications	Seven Lines and under	£0 5 0
Official and General announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6
First Page (under Contents) (Books only)	when space available Five Lines and under	0 5 0
	Every additional Line	0 1 0
Quarter Page		1 10 0
Half a Page		2 15 0
An Entire Page		5 5 0

Terms for Position Pages and Serial Insertions on application.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to fictitious names or initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnières, Paris.